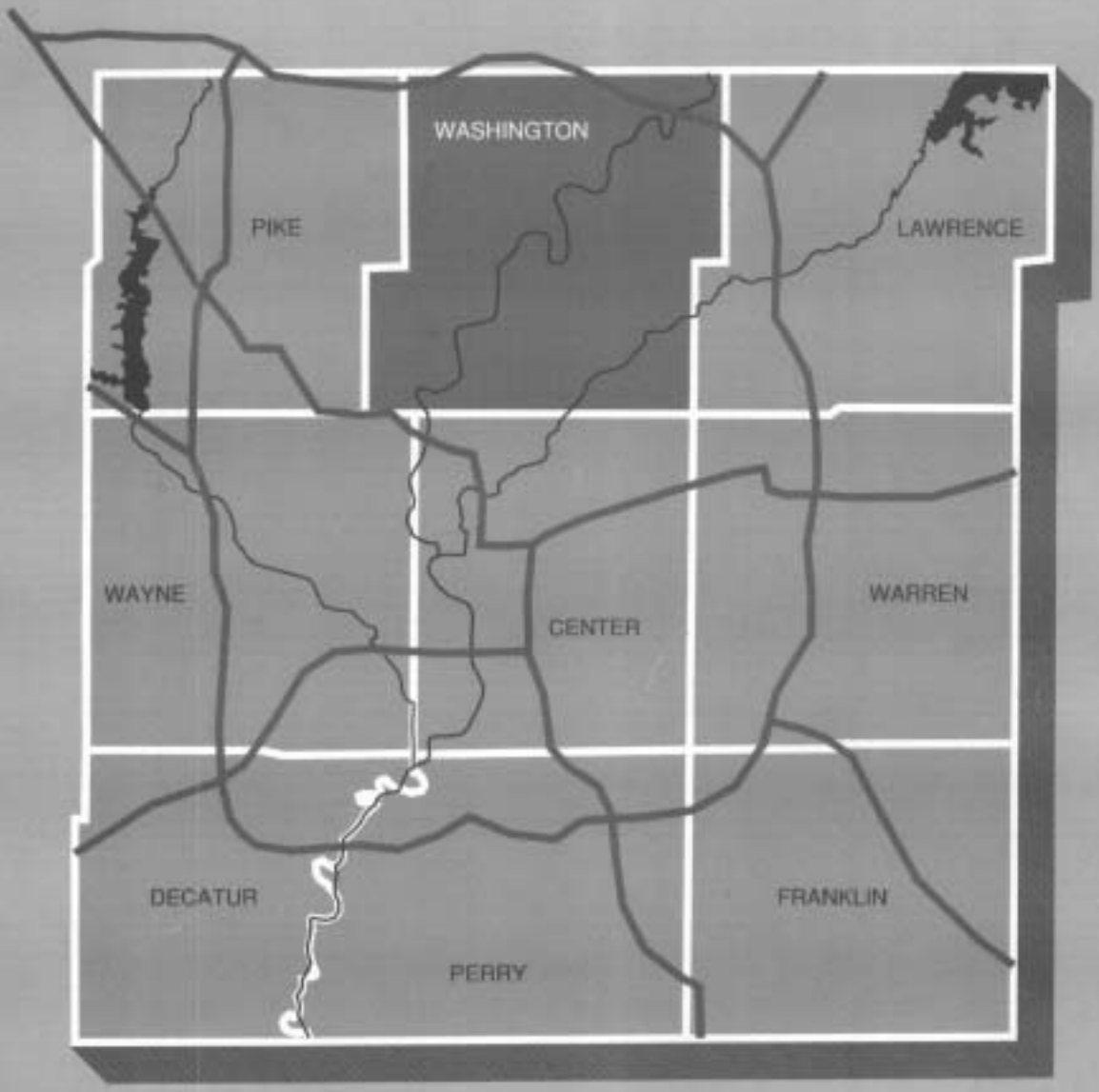
WASHINGTON TOWNSHIP



COMPREHENSIVE LAND USE PLAN

DATA INVENTORY

DEPARTMENT OF METROPOLITAN DEVELOPMENT
PLANNING DIVISION
CITY OF INDIANAPOLIS-MARION COUNTY, INDIANA

STEPHEN GOLDSMITH

WASHINGTON TOWNSHIP

COMPREHENSIVE PLANNING STUDY

DATA INVENTORY

A Collection of Information
to Begin the Washington Township
Comprehensive Plan Revision

March 1, 1993

City of Indianapolis - Marion County
Stephen Goldsmith, Mayor

Department of Metropolitan Development
Planning Division
Jon Meeks, Administrator
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CITY OF INDIANAPOLIS
STEPHEN GOLDSMITH
MAYOR

March 1, 1993

Dear Washington Township Citizens:

This Washington Township Data Inventory presents background materials that will be useful in the preparation of the Washington Township Comprehensive Planning Study.

The Washington Township Comprehensive Planning Study will provide a public forum for a discussion of the opportunities and the issues in this developing area. Nearly eighty-five percent of the Township's land area is currently developed, and the remainder will present important development decisions over the next 20 years. Decisions made now will impact the quality of life for Washington Township residents for many years to come.

During this study there will be an opportunity for all Washington Township citizens to participate in the planning process. This planning process includes a series of informational and "work shop" meetings with township residents, neighborhood groups, business representatives, and other interested parties. The resulting product of these meetings will be a revised Comprehensive Land Use Plan which will then be considered for adoption by the Metropolitan Development Commission.

The following materials provide a common base of knowledge to begin these important meetings. Additional information regarding the contents of this Data Inventory or information regarding participation in the Washington Township Comprehensive Planning Study can be obtained from the City of Indianapolis, Department of Metropolitan Development, Division of Planning. Please contact Tom Bartlett, Senior Planner with the Planning Division, at 327-5151.

Sincerely,

Jon Meeks, Administrator

JM:tmb

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WASHINGTON TOWNSHIP DATA INVENTORY

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INTRODUCTION

THE PURPOSE OF TOWNSHIP PLANNING

The purpose of planning in Washington Township is to ensure the preservation, redevelopment, and enhancement of existing development while encouraging efficient and orderly new growth. Through the efforts of the city and the residents of the township, a plan can be developed with specific guidelines for the coordination of resources, the reinforcement of township goals, and the realization of township residents' ideas. When the township plan is finalized by the Washington Township residents' Planning Committee and adopted by the Metropolitan Development Commission it becomes official policy. Consequently, it will be used as a guide for implementing public improvements programs, making decisions on zoning cases, inviting private investment, and creating an orderly land use pattern for the development of the township.

The township plan is a detailed plan of a part of Marion County. This plan is a refinement of the overall Comprehensive Plan. Since its major function is to guide development, the plan does not mandate action, but outlines the necessary steps to action. Township planning seeks to guide both short-term and long-term improvements, but is focused principally on those changes which may require considerable time and effort to accomplish.

A vital part of township planning is the involvement of the residents. Township residents express their needs and desires, which are then examined and interpreted through an organized process with the active participation of those same residents. The township's assets, problems and community resources are researched, and recommendations for improvement are formulated. Meaningful goals, policies, plans, and programs result when citizens, planners, and local interest groups exchange information. The end product is a consensus document reflecting a partnership between the township residents and the city. The township plan sets the stage for continuing community-government relations and identifies the steps required for implementation over a 20-year period.

THE PLANNING PROCESS

The Planning Division staff will prepare the Washington Township Comprehensive Plan together with other city agencies, the Washington Township Planning Committee, and other interested groups and individuals. The process includes the following principal steps:

1) Preparation of a data inventory;
2) identification of township assets and problems;
3) establishment of township issues and goals;
4) preparation of planning recommendations;
5) review and update of planning recommendations;
6) preparation of a general land use plan;
7) preparation of the final plan;
8) adoption of the plan by the Metropolitan Development Commission.

CHAPTER 1

AN EARLY HISTORY OF WASHINGTON TOWNSHIP

John Allison surveyed his homestead--80 acres of wilderness situated east of White River at what is today 86th Street. A small clearing had been hewn from the forest and a log cabin with puncheon floors raised to house his wife and eight children. They had traveled with him from southern Indiana in search of opportunity and a new beginning.

The trip had not been easy. The journey had taken months--most of the way having to be cleared of trees, saplings and brush to allow passage of their small wagon loaded with the family's possessions and a few meager staples to supplement their daily diet of wild game and foraged roots and berries. The journey was made in isolation except when an occasional campsite was shared with a hunting party of Delaware Indians. Little animosity existed at the time between the "White Man" and the region's native inhabitants--this only coming later with the clash of cultures, and intensified by the settlers' insatiable need to "own" their land.

The year was 1819. It lay at mid-point between the Indian Evacuation Treaty of 1818, which opened up central Indiana for settlement, and the 1820 act of the General Assembly that transferred the state's capitol from Corydon to Indianapolis--"The Capitol In the Wilderness", as to which it was commonly referred. Predating the City's actual constitution as the state capitol in 1821 by well over a year, Allison's settlement in Washington Township is considered to be its first.

This was shortly followed by the arrival of William and Joseph Coats who settled two miles to the northwest in the vicinity of what is today Nora, and that of Hiram Bacon, Sr. who came in 1819 as part of a survey team from Massachusetts and permanently settled in the township in 1821. His brother, William, had preceded him by several months. Hiram purchased 240 acres from this brother on which a portion of the settlement Malott Park was later located east of Keystone Avenue and south of 56th Street. For many years Hiram operated the largest cheese dairy in Marion County and, perforce, central Indiana.

Other early arrivals were Martin McCoy, the Henry Cruise family, William Hardin, Joel Wright (a garrulous young man who was extremely well liked by the early settlers, served as township trustee, and was twice elected to serve as Washington Township Justice of the Peace), and Hezekiah Smith. Mr. Smith, with his wife and eleven children, settled a half mile east of Broad Ripple. His family would later play a substantial role in the formative years of the township.

At the time of his arrival, there were only two or three cabins between Hezekiah Smith and the original Indianapolis donation. A wagon-maker by trade, Mr. Smith set to farming his

homestead while serving as the township's first Methodist Episcopal preacher. His cabin served as a makeshift chapel. He lived but four years in Indianapolis. After his death, he was buried in the cemetery on Hiram Bacon's land. His sons carried on the family tradition of hard work and dedication to the community established by Hezekiah.

Daniel Smith, Hezekiah's eldest son, served a total of fifteen years as a Justice of the Peace. After having been re-elected, he resigned to accept the office of associate judge of the Circuit Court. He served in this capacity until the office was abolished. In 1851 he was admitted to the Bar and served as an attorney in Circuit and "Inferior" Courts the rest of his life. He also served as the Washington Township Trustee for three years and was instrumental in organizing the Washington Township School System.

Hezekiah, Jr. followed in the footsteps of his father by serving as a minister until his death in 1899. Peter, Hezekiah's second son, undertook the profession of gunsmithing. He later studied medicine and set up a medical practice in the vicinity of Millersville. His restlessness later took him to Tennessee, New Orleans, San Francisco (where he founded a hospital), South America and, eventually, to England where he lived until his death in 1904.

By 1824, a slow but steady influx of settlers had gradually populated the lands bordering the township's principal water-courses. The brothers Hiram and William Bacon, Jacob Coil, Elijah Dawson, the Wittingers, James McIlvain, Henry Kinberlain and Jacob Ringer (the organizer of a Lutheran colony from Maryland) all farmed sizeable tracts of land and established a character of success and prosperity in Washington Township.

Peter Negley settled along Fall Creek in 1823 on 320 acres of land. In partnership with Seth Bacon, he built the township's first grist mill there and, in the process, established a tradition of milling at the site that was to endure for over fifty years. The mill motivated the name "Millersville," which was given the community by Peter Negley. Millersville Lodge #126 was the first founded in Washington Township (1852). Its charter membership included William Millard, William Bacon, Hiram Haverstick, William Johnson, and Joseph Nesbit. Although the business was brisk, the milling operations never achieved a great deal of success. In fact, one local historian contended that it proved to be "an annoyance and continued expense to every person that ever had anything to do with it." The village (also known at one point as "Brubaker's Mill") gradually lost its identity--along with its post office which was moved to Hammond's, James' Switch, and, finally, to Malott Park. By 1884, Millersville included fourteen dwellings and a population of under ninety.

In 1838 the village of Allisonville was laid out by John Allison on property he owned west of what was to become the village of Castleton on the Noblesville Road (Allisonville Road today). The original plat contained forty lots. In the 1840's, the village boasted two hotels and numerous business establishments. Doctors A. G. Ruddle and John Nesbit served the community for over forty years. By the 1880's, the town had dwindled in importance and had fewer than fifty residents. John Allison's son, James, was a merchant in the town of Nora to the west, which had grown up around a railroad station. In the 1880's Nora had a post office, two general stores, two blacksmiths and a population of about 150.

The village of Mapleton was laid out in 1871, straddling the Washington and Center Township Line in the general vicinity of Fall Creek. The Washington Township half of the village was situated on land owned by John Messersmith, who had purchased it from Thomas Roark. One of the original residents of the area was Thomas McClintock who settled a half mile from the village in 1829. The small village thrived. By 1884 its population was over 300. Commerce was brisk, its Methodist-Episcopal Church was of brick construction, and a graded school served the youth of the town. Mapleton continued to grow and was annexed by Indianapolis in the 1920's. Today little is left to recall its existence--even the name of its main thoroughfare (Maple Road) having been changed to 38th Street.

In contrast, although it too was annexed by Indianapolis about the same time as Mapleton, the village of Broad Ripple has maintained its identity to this day. Laid out in 1837 by Jacob Coil (a township resident since 1823) it contained 47 lots. Originally a trading point on White River, it derived its name from the ford at its shallows which produced the widest ripple effect on the water's surface in several miles. In 1843, John Burk built the town's first sawmill at White River. It was later rebuilt on a grander scale by Burk and Peter Koontz who operated it profitably until it was washed away by the "Great Freshet" in 1875.

The town grew in population and commerce, waned in the 1880's, then spurted again in the boom times of the 1890's and 1900's. Before the advent of refrigeration, Broad Ripple was known as the "Ice House of Indianapolis"--large slabs of ice were cut from the frozen surface of White River and stored for shipment to Indianapolis during the summer months. It also served as a recreation center for the capitol, boasting an amusement park, a zoo and several pleasure boats serving as floating entertainment centers for large groups of vacationers. This latter undertaking was one of mixed success, and it disappeared shortly after the sinking of one of the vessels. This unfortunate event occurred when a holiday party of millworkers from Indianapolis rushed, in mass, to the leeward side of the boat to get a better view of two young ladies passing in a canoe, thus capsizing the party vessel.

Elijah Dawson was another early resident of the Broad Ripple area and a land owner of considerable wealth. His son, Charles, was reputed to be the richest man in the township in the latter part of the 19th Century (Dawson Lake still bears the family name).
A contemporary of Elijah, William Christ was known throughout the township for the unpleasant circumstance that he had been wounded eighteen times over the course of his career as an Indian fighter.

The village of Wellington abutted Broad Ripple to the west. Originally platted by James and Adam Nelson in May of 1837, it contained thirty-two lots. The Broad Ripple Post Office was located in Wellington as was the Broad Ripple Lodge (then the largest outside the City of Indianapolis). The village's fortunes followed that of its neighbor to the east growing to over one hundred inhabitants and then reverting to farmland by the 1880's. It did not recover as did Broad Ripple and gradually lost its identity altogether. Its fate was similar to that of Malott Park to the east which briefly flourished after its founding by Daniel and John Stewert in 1872 only to be lost in the overall growth of the township.

Washington Township became known as a prestigious area of Indianapolis in which to reside and over the course of the early 1900's the wealthy of Indianapolis built mansion after mansion along the North Meridian Street corridor and on the bluffs overlooking White River. Although now nearly completely built up, the township still maintains an aura of affluence for its inhabitants. Its challenge today is essentially one of maintenance and conservation, as well as revitalization for several small areas in its older southern portion.

CHAPTER 2

WASHINGTON TOWNSHIP DEMOGRAPHICS

POPULATION

Washington Township has experienced moderate growth during the past three decades. The total township population has increased from 97,861 in 1960 to 133,969 in 1990--an increase of approximately 35% over the thirty-year period. Most of this growth occurred between 1960 and 1970, with the population increasing by 29% during that decade. The rate of growth slowed considerably after 1970. (For population data, see Table 1 and Figure 1.)

The growth in Washington Township can be put into clearer perspective when contrasted with the rates of growth experienced by Marion County's eight other townships. Between 1960 and 1970, Pike was the fastest growing township in the county, with a 125% increase in its population. The next fastest-growing township was Lawrence (93% increase), followed by Perry (58% increase). The remaining suburban townships grew at much lower, though still strong, rates (from 27% to 44%). Center Township lost 18% of its population between 1960 and 1970.

Between 1970 and 1980, Washington's growth, like that in the rest of Marion County, had slowed. The township's population increased only two percent during that decade, while Pike, Franklin, and Decatur Townships grew much more quickly (69%, 60%, and 28%, respectively).

More recently (1980-1990), Washington Township's growth rate has remained constant at two percent. By contrast, Pike Township's population increased by 78%, while Lawrence Township's grew by 25%. The second fastest-growing township was Franklin with an increase of just over 30%. Decatur and Perry experienced 9% and 8% increases in population, respectively. Warren and Center Townships both lost population (-1.4% and -13%, respectively).

AGE STRUCTURE

When looking at Washington Township's population change by age groups, some interesting trends are evident (see Table 1 and Figure 2). The number of preschool-age children decreased by 15.3% from 1960 to 1980. Much of this decrease was experienced from 1970 to 1980, with a decrease of 1,222, or 13%. From 1980 to 1990, however, a similar number of children were added back into the township's pre-school population. In contrast, the number of children age 5 to 19 increased significantly from 1960 to 1970 (from 25,828 to 36,033), before declining by 24% to 27,305 in 1980, and by another 14% over the next

TABLE 1
DEMOGRAPHIC PROFILE OF WASHINGTON TOWNSHIP

ITEM/AREA	1960	1970	1980	1990	60-80 % CHANGE	70-90 % CHANGE
POPULATION						
TOTAL						
WASHINGTON TOWNSHIP	97861	126136	129008	133969	31.8%	6.2%
MARION COUNTY	697597	792297	765233	797159	9.7%	0.6%
UNDER 5 YEARS						
WASHINGTON TOWNSHIP	9395	9182	7960	9136	-15.3%	-0.5%
MARION COUNTY	85216	70867	57075	63103	-33.0%	-11.0%
5-19 YEARS						
WASHINGTON TOWNSHIP	25828	36033	27305	23442	5.7%	-34.9%
MARION COUNTY	180412	238095	186967	161913	3.6%	-32.0%
20-59 YEARS						
WASHINGTON TOWNSHIP	49286	61963	70723	76561	43.5%	23.6%
MARION COUNTY	345199	383714	409179	446232	18.5%	16.3%
60-64 YEARS						
WASHINGTON TOWNSHIP	4362	5986	6402	5905	46.8%	-1.4%
MARION COUNTY	27248	31485	32714	33090	20.1%	5.1%
65 YEARS AND OVER						
WASHINGTON TOWNSHIP	8891	12978	16618	18925	86.9%	45.8%
MARION COUNTY	59191	68138	79298	92821	34.0%	36.2%
HOUSING						
TOTAL UNITS						
WASHINGTON TOWNSHIP	30287	41504	51696	57965	70.7%	39.7%
MARION COUNTY	211798	251522	285092	319471	34.6%	27.0%
OWNER OCCUPIED						
WASHINGTON TOWNSHIP	24167	28595	30824	32796	27.5%	14.7%
MARION COUNTY	136064	154941	168539	182039	23.9%	17.5%
RENTER OCCUPIED						
WASHINGTON TOWNSHIP	6120	12909	20872	25169	241.0%	95.0%
MARION COUNTY	75734	96581	116553	137432	53.9%	42.3%
HOUSEHOLDS						
TOTAL HOUSEHOLDS						
WASHINGTON TOWNSHIP	30282	41505	51768	57965	71.0%	39.7%
MARION COUNTY	211798	257522	275092	319471	29.9%	24.1%
PERSONS/HOUSEHOLD						
WASHINGTON TOWNSHIP	3.2	3.0	2.5	2.3	-22.9%	-24.3%
MARION COUNTY	3.3	3.1	2.8	2.5	-15.5%	-18.7%
RACE						
WHITE						
WASHINGTON TOWNSHIP	92665	110360	96912	98084	4.6%	-11.1%
MARION COUNTY	596835	655283	601092	615039	0.7%	-6.1%
BLACK						
WASHINGTON TOWNSHIP	5071	15222	30528	33848	502.0%	122.4%
MARION COUNTY	99912	134486	155310	169654	55.4%	26.1%
OTHER						
WASHINGTON TOWNSHIP	125	554	1568	2037	1154.4%	267.7%
MARION COUNTY	850	2528	8831	12466	938.9%	393.1%

SOURCE: U.S. Census Bureau

Figure 1

Population Growth, Washington and Selected Townships

1950-1990

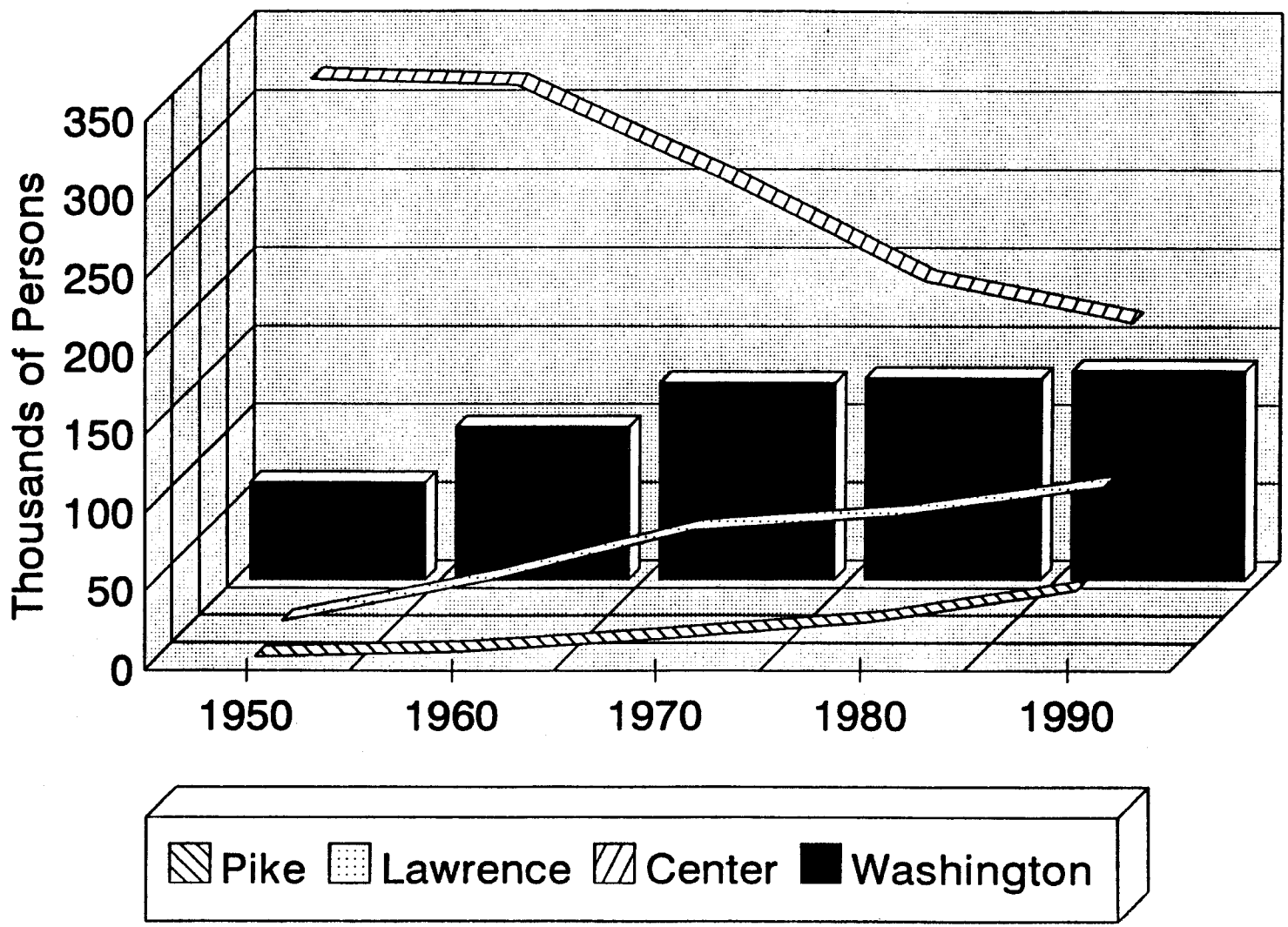
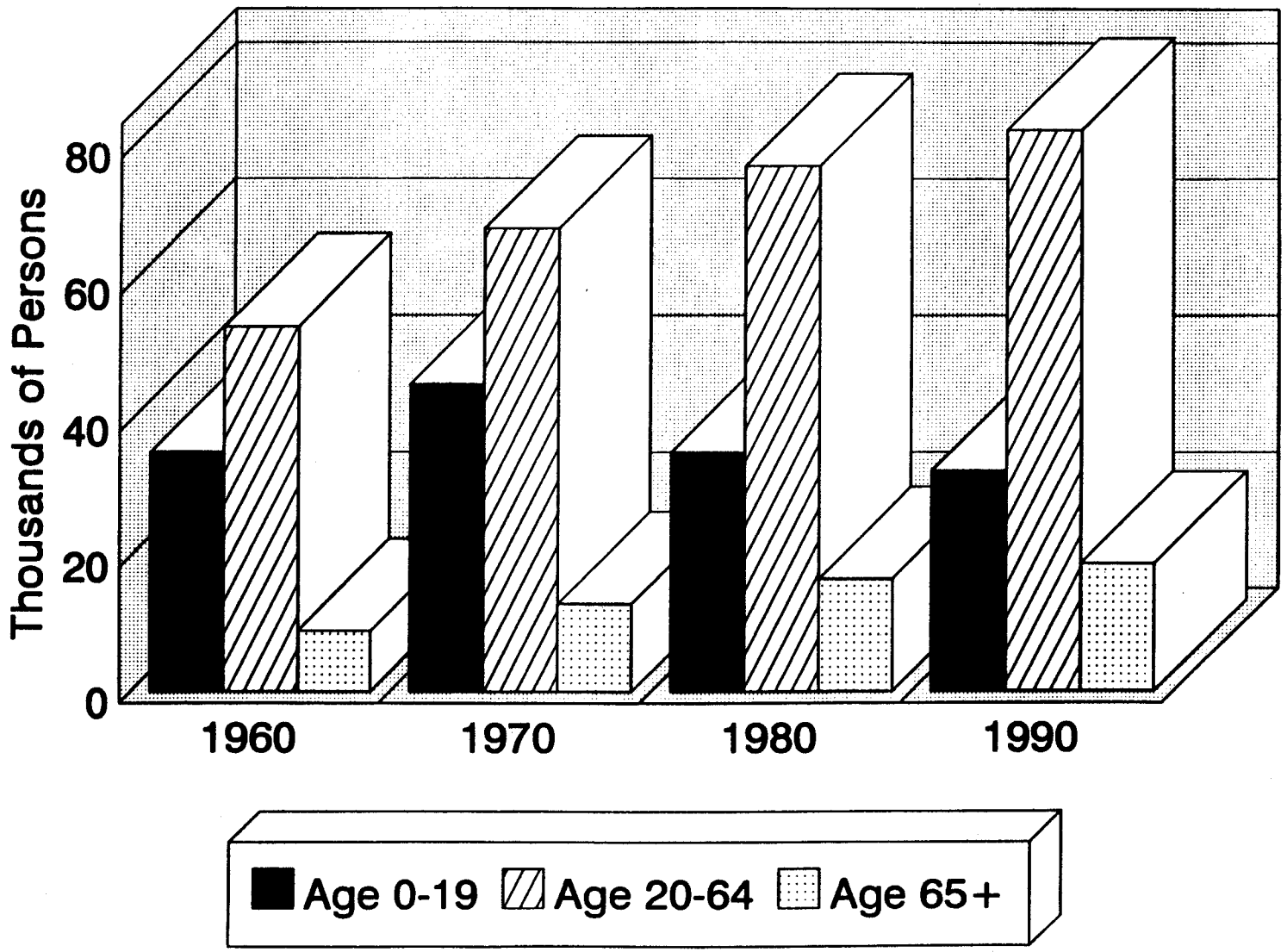


Figure 2

Population Distribution by Age Group, Washington Township

1960-1990



decade to 23,442. Meanwhile, the population age 20 to 64 (representing the bulk of the working population) increased from 53,648 to 82,466 during the 1960-1990 period, an increase of roughly 54%. The change in population for age 65 and over was slightly more dramatic--an overall 113% increase during the 1960-1990 period.

RACIAL COMPOSITION

The racial composition within Washington Township has changed fairly significantly between 1960 and 1990. In 1960, about 5% percent of the township population was black and 95% was white. By 1980, 75% of the total township population was white, 24% was black, and one percent remained as "other." Between 1980 and 1990 much more moderate change occurred, with the white population dropping slightly lower to 73%, the black population rising one percentage point to just over 25%, and other races accounting for slightly less than two percent.

EDUCATIONAL ATTAINMENT

Overall, the level of completed education attained by Washington Township residents 25 years of age and older has been increasing steadily since 1960. This trend is evident throughout Marion County. In fact, because Washington Township had a significantly higher proportion of older residents who had attained higher education levels to begin with, the percentage increases for the Marion County population overall exceed the percentage gains experienced by Washington Township.

In 1960, and continuing through 1990, the percentage of Washington Township residents who had attained no greater than four years of high school education was lower than the percentage for Marion County. Correspondingly, it has had higher percentages of residents who have attained at least some level of college education. Moreover, the percentage of residents 25 years old and over who hold at least one college degree was higher in 1990 in Washington Township than in any other township (see Figure 3).

INCOME

Between 1979 and 1989, the average per capita income of Washington Township residents has higher than that of Marion County residents as a whole (see Figure 4). According to data from the 1980 Census, the 1990 Census, and U.S. Census Bureau estimates for two-year intervals in between, the average annual per capita income for Washington Township residents increased by roughly 98%. This compares to a 90% average increase for the county as a whole, and a 115% increase for Pike Township.

Based on 1989 income data, Washington Township ranks first among Marion County's nine townships in per capita income. However, it ranks fourth in median household income

Figure 3

Highest Degree Earned, Washington and Selected Townships

% of Township Population 25 Years of Age and Older with Degree Earned, 1990

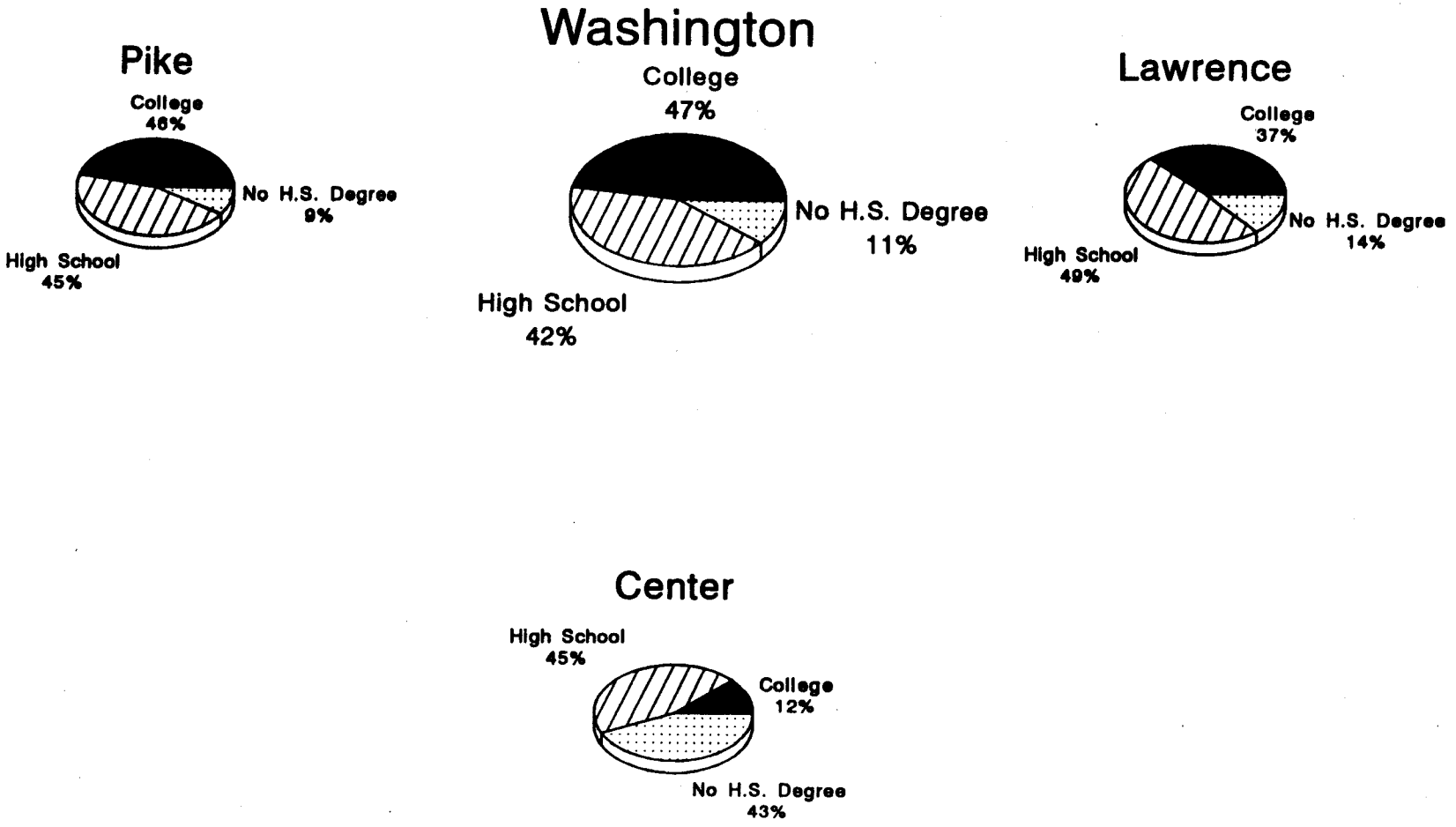
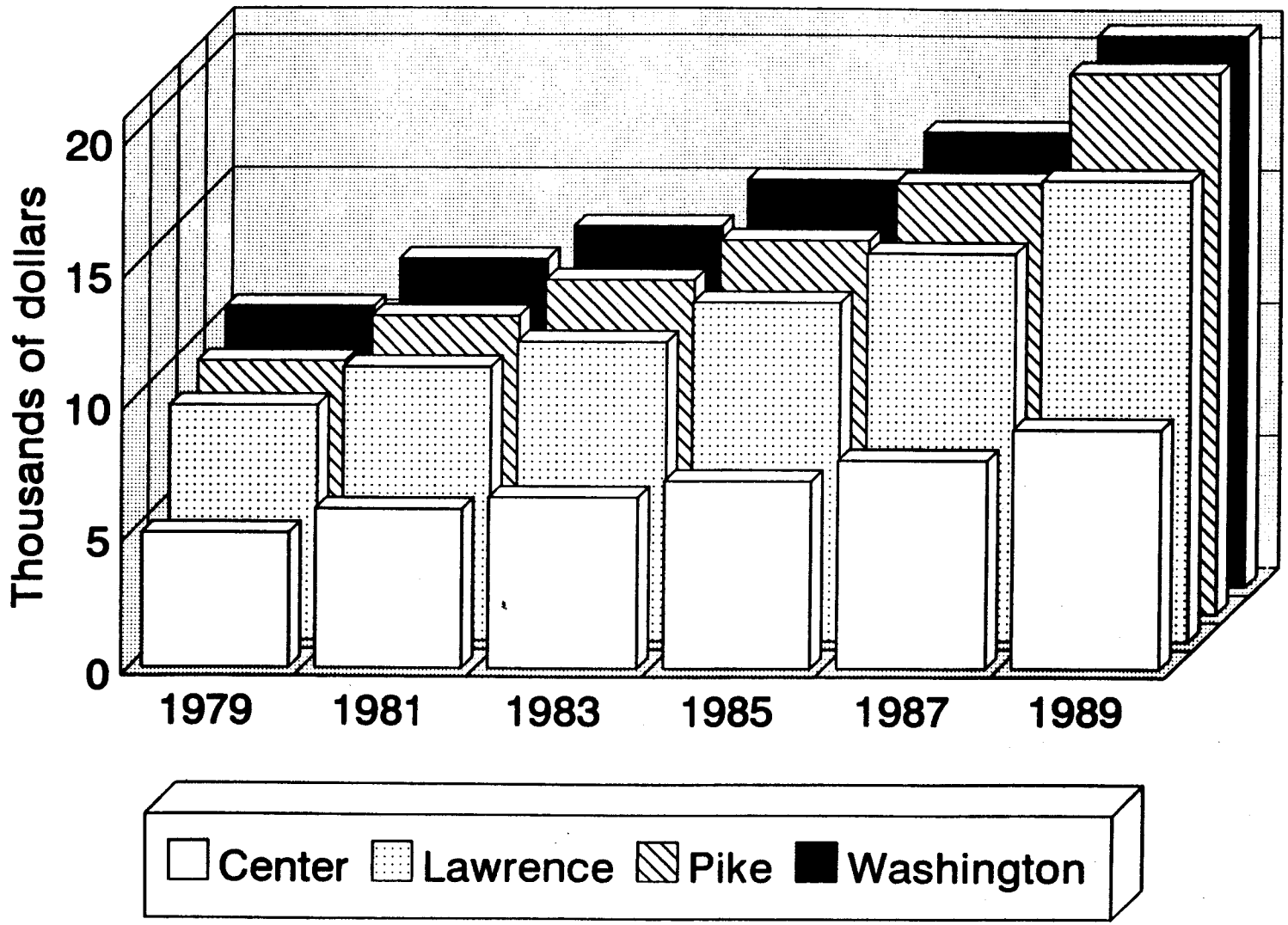


Figure 4

Per Capita Income, Washington and Selected Townships

1979-1989



($35,206 per household), after Franklin ($42,078), Pike ($35,692), and Lawrence ($35,691) Townships. Two likely explanations for this discrepancy are smaller household sizes and fewer dual-income households in Washington Township compared with other townships.

HOUSING

Strong residential growth has been the general trend in Marion County's eight outlying townships since the population of central Indianapolis began dispersing to the less developed suburban areas during the 1950's and 1960's. In the 1970's and 1980's, Washington Township's housing growth rate declined somewhat compared to those early suburbanization years but it remained steady. From 1960 to 1970, the number of housing units increased by 12,095 (from 31,347 to 43,442), a 38% increase (see Table 2). The growth between 1970 and 1980 amounted to an additional 11,369 units (from 43,442 to 54,811), for a 26% increase. There were 62,907 total units in 1990.

The significant housing stock increase between 1960 and 1980 (+75%) contrasts sharply with the more modest 32% population increase for the same period. This trend continued in the following decade with a two percent population increase, contrasting with a 15% increase in housing units. The difference between the population and housing growth rates can be explained principally by a continuing decline in average household size. This decline results from an increase in single-parent households, more "empty-nester" households, and more young one-person households.

In 1970, doubles and multi-family housing comprised 26% of all housing in the township. By 1980, that share had increased significantly to 41% of all units. By 1990, 46% of the township's total housing units were either doubles or multi-family housing. For comparison purposes, on a county-wide level, multi-family housing increased from 23% of all units in 1970 to 38% of all housing by 1987. This trend is mirrored by a similar increase in the percentage of housing units which are rented (see Figure 5).

TABLE 2

HOUSING UNIT CHANGES, 1960 - 1990

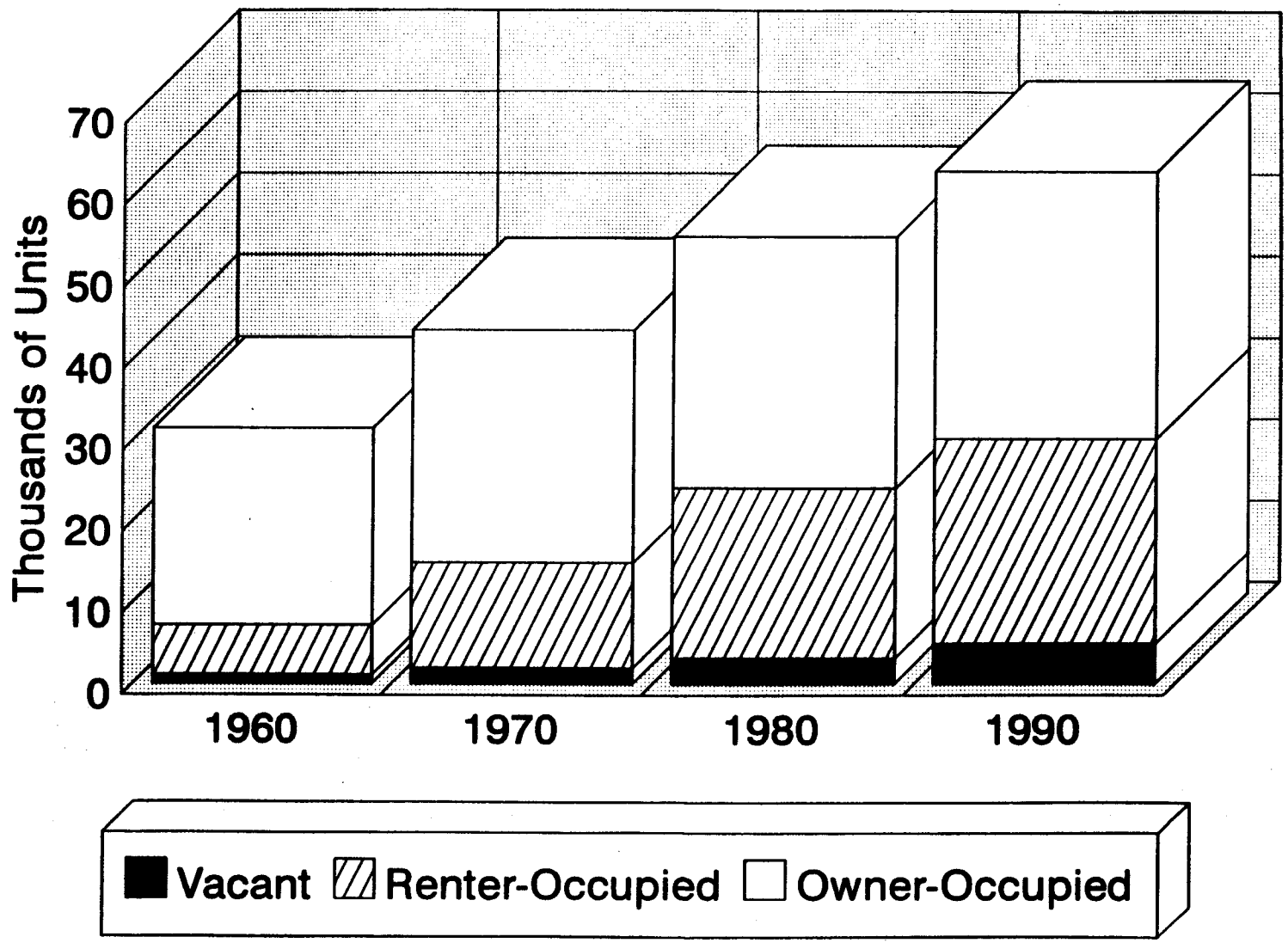
	1960	1970	1980	1990
Single-family detached & Mobile Homes	**28,637**	**32,129**	**32,224**	**33,082**
Doubles, Multi-family units, and Other	**2,710**	**11,313**	**22,587**	**29,825**
TOTAL HOUSING UNITS	**31,347**	**43,442**	**54,811**	**62,907**
OCCUPIED UNITS	30,287	41,504	51,696	57,965
Owner occupied	24,167	28,595	30,824	32,796
Renter occupied	6,120	12,909	20,872	25,169
VACANT UNITS	1,060	1,938	3,115	4,942
For Sale Only	*	347	390	510
For Rent	*	1,273	1,962	3,413
Other	*	318	763	1,019
VALUE OF OWNER-OCCUPIED UNITS				
Median Value	*	*	$54,500	$87,000
Mean Value	*	*	$60,055	$105,394

* Not available

Figure 5

Housing Unit Occupancy Status, Washington Township

1960-1990



CHAPTER 3

WASHINGTON TOWNSHIP LAND USE INVENTORY CHANGES, 1973-1990

TOWNSHIP CHANGES

A principal measure of development in any geographic area is the degree of change in the mix and spatial distribution of different land uses. For comparison purposes, all of Washington Township's various land uses were grouped into the following categories:

RESIDENTIAL LAND
- Very Low Density
- Low Density
- Medium Density
- High Density

COMMERCIAL LAND
- Office
- Retail

INDUSTRIAL LAND
- Light
- Heavy

PUBLIC & SEMI-PUBLIC LAND
- Special Uses
- Streets
- Public Parks
- Waterways

VACANT LAND

This chapter compares township land uses for the years 1973 and 1990 (see Table 3 and Figure 6). The year 1973 was compared with 1990 primarily because aerial photographs are available for 1973. The existing land uses for 1990 were determined using more recent aerial photos and field surveys. The result is a direct comparison of actual land use and zoning at two moments in time (1973 and 1990). The following is a brief summary of the principal land use changes that took place during the seventeen-year period.

RESIDENTIAL LAND

Between 1973 and 1990, residential land use increased by over 18% in Washington Township. The very low density residential land use category refers to large lot single family development, while the low density category refers to smaller lot single family development and most two-family development. Over half of Washington Township's land is developed with very low and low density residential uses--a much higher percentage than for Marion County as a whole, where very low and low density residential uses make up less than 30% of the total acreage. Between 1973 and 1990, very low and low density residential uses developed most rapidly in the northwestern quadrant of Washington Township.

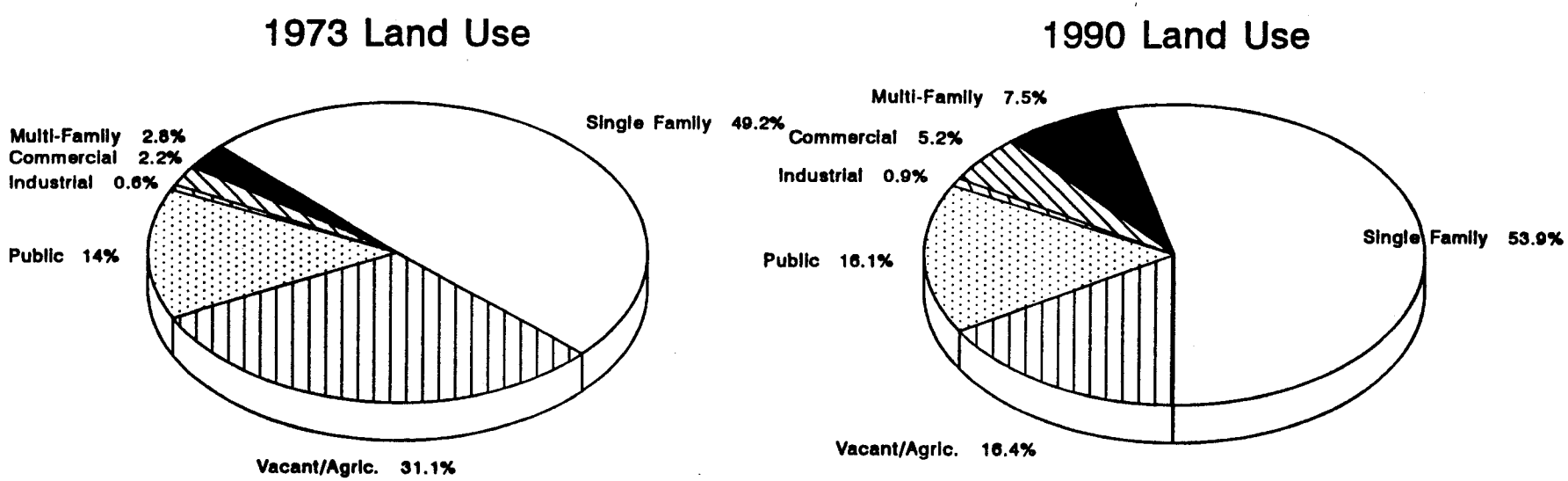
TABLE 3
WASHINGTON TOWNSHIP LAND USE CHANGES
1973 - 1990
(ACRES)

LAND USE	1973	1990	% OF 1973	% OF 1990	ABSOLUTE CHANGE	% CHANGE
1. Residential						
a. Single Family	9606.5	10309.8	30.8	33.1	703.3	7.3
b. Single & Two-Family	5734.8	6472.6	18.4	20.8	737.8	12.9
c. Multifamily	856.8	2345.2	2.8	7.5	1488.4	173.7
Subtotal	16198.1	19127.6	52.0	61.4	2929.5	18.1
2. Commercial						
a. Office	86.9	526.6	0.3	1.7	439.7	506.0
b. Retail	607.2	1102.6	1.9	3.5	495.4	81.6
Subtotal	694.1	1629.2	2.2	5.2	935.1	134.7
3. Industrial						
a. Light	167.7	233.8	0.5	0.8	66.1	39.4
b. Heavy	31.5	35.7	0.1	0.1	4.2	13.3
Subtotal	199.2	269.5	0.6	0.9	70.3	35.3
4. Public & Semipublic						
a. Special Uses	2429.1	2970.5	7.8	9.5	541.4	22.3
b. Streets	1578.9	1578.9	5.1	5.1	0.0	0.0
c. Public Parks	166.2	270.7	0.5	0.9	104.5	62.9
d. Waterways	196.2	196.2	0.6	0.6	0.0	0.0
Subtotal	4370.4	5016.3	14.0	16.1	645.9	14.8
5. Vacant Land						
Total Acres in Twp.	31145.0	31145.0				
-Land Used in 1-4	21461.8	26042.6	68.9	83.6	4580.8	21.3
Vacant Acreage	9683.2	5102.4	31.1	16.4	-4580.8	-47.3

Figure 6

Washington Township Land Use Changes

% of Township Acreage for Selected Land Uses, 1973-1990



Of the nearly 3,000 acres of residential development during this period, just over one-half was medium and high density, or multi-family, development. The 174% increase in multi-family acreage for the township was concentrated in the northern half of the township. Yet even in the southern half, the 37% rate of increase in multi-family residential acreage from 1973 to 1990 far exceeded the rates of other land use categories.

COMMERCIAL LAND

The change in the percentage of land developed and used for commercial purposes was more pronounced than that experienced in the residential land use category. Commercial land accounted for a little over 2% of the township's total acreage in 1973 and increased to more than 5% of the total acreage by 1990. The 5% figure is similar to the overall percentage for Marion County.

Land devoted to retail uses increased by nearly 81% between 1973 and 1990. Over three-quarters of the township's retail development took place in the northeastern quadrant.

Developed office acreage increased from 86 to 527 acres, an increase of over 500%. Similar to retail development, nearly three-quarters of office development was in the township's northeastern quadrant. Among the nine Marion County townships, Washington is second only to Center Township in acreage developed for office use, both in terms of total acreage and in percent of overall township acreage.

INDUSTRIAL LAND

Industrial land use increased by 35% between 1973 and 1990. Light industrial land uses accounted for nearly all of that increase. Land devoted to heavy industrial uses increased by only four acres.

Overall, industrial land use as a percentage of the township's total land acreage increased by only 0.3%, to 0.9%. The 0.9% total is not dissimilar from Lawrence Township, where industrial uses make up less than 2% of the land. In contrast, however, industrial uses in neighboring Center Township and Pike Township occupy about 28% and 7% of their townships, respectively. The eastern half of Washington Township contains nearly all of the township's industrial development.

PUBLIC AND SEMI-PUBLIC LAND

Land used for public and semi-public purposes increased slightly between 1973 and 1990. The amount of land devoted to public parks increased by 104 acres, a 63% change. Expansion of the Indiana State Fairgrounds, North Central High School, and St. Vincent's

Hospital also contributed to an increase in public and semi-public land use. By 1990, about 16% of Washington Township's land was developed for public and semi-public uses, a percentage identical to the countywide figure.

VACANT LAND

Vacant land for the purpose of this study includes idle land and land that is used for agriculture. Streets, waterways, and public parks are considered public and semi-public land, and are not counted as vacant.

In 1973 vacant land constituted about 31% of the total land area in the township. The years 1973 to 1990 saw a 47% decrease in vacant land, with over one-half of the newly developed land located in the northeastern quadrant of the township. By 1990 Washington Township was left with a total of just over 5000 acres of vacant land. This nearly eight square miles of vacant land is made up primarily of stream valleys and floodplains. Nearly half of the vacant land is in northeastern Washington Township.

SUMMARY

Taking all land use categories into account, Washington Township experienced a 21% increase in developed acreage during the period from 1973 to 1990. Washington Township is the second most developed township in Marion County, after Center Township. The following observations summarize Washington Township's land use changes between 1973 and 1990:

- The largest absolute change from vacant land is attributed to residential land development, which increased by almost 3,000 acres. Medium and high density, or multi-family, uses developed at the fastest rate of any residential category.

- Commercial retail and office uses developed most rapidly in the northeastern quadrant of the township. Office development experienced the highest rate of growth in acreage for any land use (506%).

- Less than one percent of Washington Township's land is occupied by industrial uses. Nearly all industrial development has occurred in the eastern half of the township.

- A slight increase in public and semi-public land resulted largely from the development of parks and the expansion of the Indiana State Fairgrounds, North Central High School, and St. Vincent's Hospital.

- Vacant land decreased by nearly 47%. By 1990 vacant land accounted for about 16% of total township acreage, or approximately eight square miles of land.

CHAPTER 4

LAND USE AND COMPREHENSIVE PLAN COMPARISONS

METHODOLOGY

Two sources were utilized to obtain the data which are compared in this section:

1. the general land use plan from the 1984 Marion County Comprehensive Plan, which recommends a land use pattern for Washington Township when fully developed;

2. the land use inventory, showing the 1990 existing land uses as identified from aerial photography and field surveys.

The 1984 Marion County Comprehensive Plan contains a general land use plan for each township. This chapter compares the Comprehensive Plan's land use recommendations for Washington Township to the land use inventory previously discussed in this study. This comparison will offer insight regarding the success of the general land use plan objectives.

Unfortunately, precise comparisons among the Comprehensive Plan and the land use inventory cannot be made because of variations in land use classifications and boundary lines. In the land use inventory agricultural land is considered vacant. However, the Comprehensive Plan is a policy guide that assumes full development; and thus it contains no vacant land or agricultural categories for comparisons.

The boundary line problem principally affects the residential land category of the land use inventory when compared to the plan. Property lines generally serve as the determinant of plan recommendation boundaries. The land use inventory was prepared from aerial photography that does not clearly identify property lines. Therefore, the land use inventory consists of general estimates of the amount of land devoted to each use. This method may generate slightly lower residential land use figures, particularly for the more rural areas of the county.

Limitations are inherent in any analysis of land use employing different information bases. It is nonetheless possible to offer the generalized comparisons that follow in the text, Table 4, and Figure 7. Figure 7 also includes data from the 1990 official zoning map.

TABLE 4

WASHINGTON TOWNSHIP COMPARISONS

LAND USE	1990 LAND USE (acres)	% of total	1990 ZONING (acres)	% of total	COMPREHENSIVE PLAN (acres)	% of total
1. Residential						
V. Low Density	10309.8	33.1	12086.7	38.8	13977.5	44.9
Low Density	6472.6	20.8	5905.2	19.0	6071.5	19.5
Med. & High Density	2345.2	7.5	3490.2	11.2	3725.0	12.0
Total Residential	19127.6	61.4	21482.1	69.0	23774.0	76.3
2. Commercial						
Office	526.6	1.7	1131.9	3.6	#	#
Retail	1102.6	3.5	1434.0	4.6	#	#
Total Commercial	1629.2	5.2	2565.9	8.2	1800.0	5.8
3. Industrial						
Light	233.8	0.8	205.7	0.7	559.8	1.8
Heavy	35.7	0.1	45.9	0.1	0.0	0.0
Total Industrial	269.5	0.9	251.6	0.8	559.8	1.8
4. Public & Semipublic						
Parks	270.7	0.9	497.8	1.6	349.4	1.1
Special Uses	2970.5	9.5	4044.4	13.0	2886.7	9.3
Streets/Waterways	1775.1	5.7	171.5	0.6	1775.1	5.7
Total Public	5016.3	16.1	4713.7	15.1	5011.2	16.1
5. Agriculture/Vacant	5102.4	16.4	2131.7	6.8	0.0	0.0
T O T A L S	31145.0	100.0	31145.0	100.0	31145.0	100.0

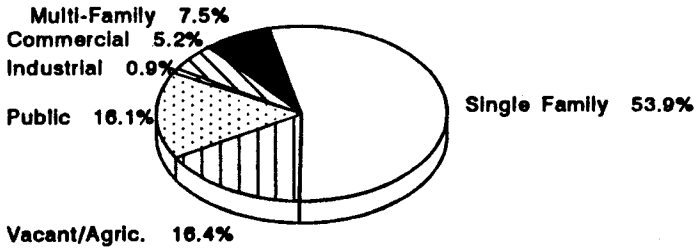
Commercial Office and Commercial Retail were not distinguished from one another on the 1984 Comprehensive Plan.

Figure 7

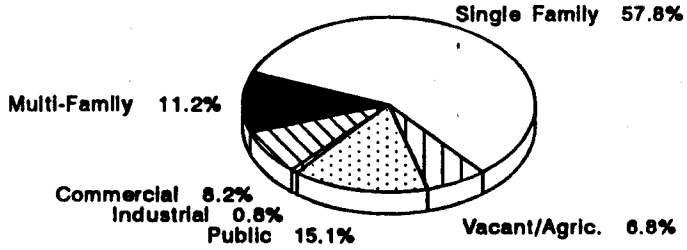
Washington Township Land Use Comparisons

% Comparisons of Township 1990 Land Use, 1990 Zoning, and the 1984 Comprehensive Plan

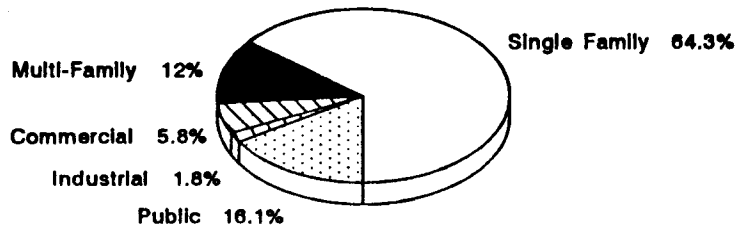
1990 Land Use



1990 Zoning



1984 Comprehensive Plan



COMPARISONS BY TYPE OF LAND USE

RESIDENTIAL LAND

In 1990, residentially developed land in Washington Township accounted for 19,127 acres, or 61% of the total township land area. At the same time, 23,774 acres (76% of the township's total acreage) were recommended for residential use on the land use plan map. The difference between these numbers shows that approximately 4,600 acres planned for residential development were not yet developed in 1990. Therefore, the township presumably could accommodate future residential growth.

In 1990, very low density residential land uses accounted for 10,309 acres (33%) of the total township land area, while the Comprehensive Plan recommends the ultimate development of 13,977 acres (44% of the township) for very low density residential use.

Slightly more land is used for low density residential land uses than is recommended by the Comprehensive Plan. In 1990, there were 6,472 acres used for low density residential land uses (20% of the township). The Comprehensive Plan recommends 400 fewer acres be developed for low density residential uses.

Medium and high density residential development occupied 7.5% of the township's land area (2,345 acres) in 1990. Meanwhile, the 1984 Comprehensive Plan calls for 3,725 acres of medium and high density development, which could ultimately raise the percentage of land devoted to multi-family use up to 12% from a 1990 level of 7.5%.

COMMERCIAL LAND

By 1990, 1,629 acres of land were used for commercial purposes, accounting for 5% of the land in Washington Township. According to the Comprehensive Plan, approximately 1,800 acres (5.8% of the land area) should eventually be developed commercially. (It should be noted, however, that roughly 2,500 acres were already *zoned* for commercial use in 1990.)

INDUSTRIAL LAND

Of the 559 acres recommended for industrial development by the 1984 Comprehensive Plan, about half are currently used by light and heavy industry (about 1% of the township's total acreage). Most of the remaining planned industrial land area continues to be vacant or used for office, retail, or residential purposes.

PUBLIC AND SEMI-PUBLIC LAND

This category includes public uses such as churches, schools, parks, and municipal buildings, as well as land recommended by the Comprehensive Plan for limited development (Urban Conservation). The Urban Conservation designation was typically applied to land areas within a floodplain or to areas which possess such significant environmental features as substantial woodland areas, steep slopes, or wetlands.

Of the 349 acres planned for public parks in the Comprehensive Plan, roughly 270 acres are actually used for active public recreation. The remainder consists principally of natural and passive recreation areas in Marott Park, Holliday Park, and Solomon Park.

Other than park land, it is difficult to accurately compare the total acreage data for existing public and semi-public land use with the data for the Comprehensive Plan's total area recommended for public and semi-public uses. The main reason is that the Comprehensive Plan does not recognize smaller schools (only high schools are shown on the land use plan map), churches, smaller municipal properties, and other special uses. Therefore, although the aggregate land area occupied by these special uses typically accounts for a significant percentage of total land, their acreage cannot be effectively compared with the special use acreage data compiled for the Comprehensive Plan. Additionally, recommended Urban Conservation land is not included in the land use totals. Thus, direct comparisons between land use and the Comprehensive Plan are complicated further for public and semi-public land. These two principal limiting factors should be remembered whenever references to these figures are made.

CHAPTER 5

WASHINGTON TOWNSHIP TRANSPORTATION SYSTEM

Transportation is an extremely important city service and it is an equally important factor in determining the type and density of development in Metropolitan Indianapolis. In high growth areas, there will be increased demands for providing improved transportation services. This chapter describes the transportation system in Washington Township, including

- a description of the existing facilities,
- a needs assessment, and
- a summary of planned improvements.

DESCRIPTION OF EXISTING FACILITIES

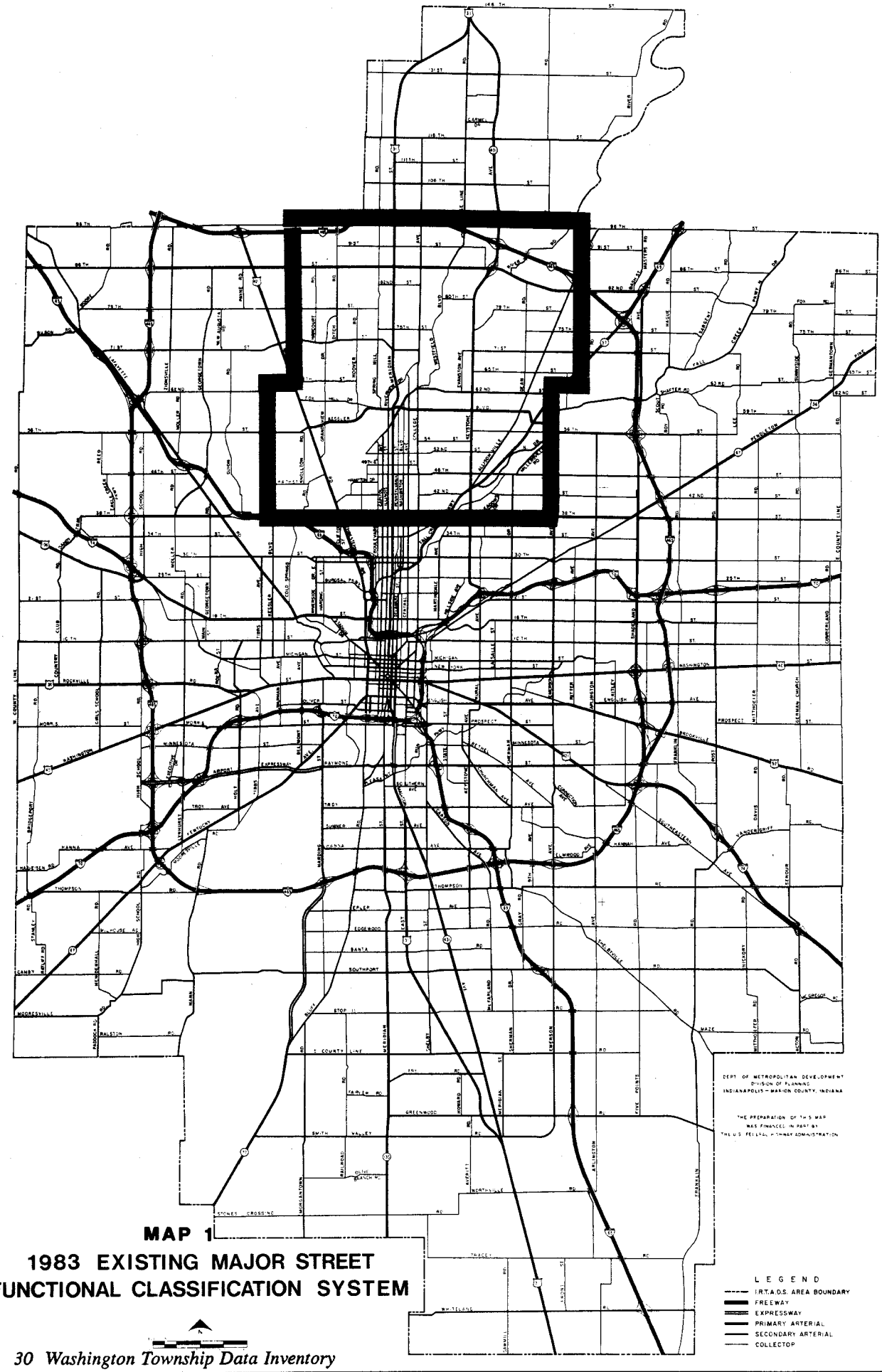
EXISTING STREET SYSTEM

Washington Township's existing transportation network is explained in part by its functional street classification. The functional classification system is the grouping of roadways in the planning area by their principal uses in the overall transportation system. It is based upon the concept that each street, road, and highway has a predominant purpose ranging from localized access (such as streets in residential subdivisions) to through-movement (such as freeways). The functional street classifications for all of Marion County are illustrated on Map 1. Table 5 provides definitions of the classification categories.

The City's street system is a combination of a grid system containing rectangular blocks and a spoked-wheel pattern of streets converging on the downtown area. Washington Township's street system is designed along the same grid-like pattern, with Meridian Street, Allisonville Road, Michigan Road, and State Road 37 serving as the "spokes" that move traffic in and out of the downtown area.

PUBLIC TRANSIT

The Indianapolis Public Transportation Corporation/METRO currently operates 13 bus routes which serve major residential, employment, and retail centers within Washington Township.



MAP 1

1983 EXISTING MAJOR STREET FUNCTIONAL CLASSIFICATION SYSTEM

Table 5

Indianapolis Functional Street Classification Definitions

1) Freeways	Divided highways with full control of access and grade-separated interchanges. Primary function is movement of traffic, in particular long trips made within and through the study area. These roads are designed for high-speed operation (50-60 MPH) and require wide rights-of-way ranging up to 300 feet.
2) Expressways	Access controlled routes with design and operational characteristics similar to freeways, with some intersections at-grade. Access control is usually obtained by using medians, frontage roads, and selected location of intersections. These roads are designed for relatively high-speed operation (45 MPH) and require rights-of-way ranging up to 200 feet.
3) Primary Arterials	These routes have greater traffic-carrying capabilities and higher levels-of-service than other at-grade routes to channelize major traffic movements. They either carry higher volumes than other adjacent routes or have the potential to carry higher volumes. They serve as connecting routes to the freeway system and to other primary arterials, and are oriented primarily to moving traffic rather than serving abutting land use. Rights-of-way may range up to 120 feet.
4) Secondary Arterials	These routes serve a higher percentage of short trips than do primary arterials. They carry significant volumes and are needed to provide system continuity. Right-of-way widths may range up to 100 feet.
5) Collectors	The primary function of collector streets is to collect traffic from an area and move it to an arterial while also providing substantial service to abutting land uses.
6) Local Streets	The remainder of the surface streets, local street, have the primary function of service to abutting land uses.

These routes are identified on Map 2. Of the 13 routes in the township, three are express routes and ten are local. There are six Park-and-Ride locations in Washington Township. The Park-and-Ride system was designed so that individuals not having immediate access to an express route in their area can utilize METRO services by parking their cars at a specified location to board the bus.

BRIDGES

Of the 477 bridges in Marion County, 66 are located in Washington Township. Sufficiency ratings are used to describe the structural condition of bridges. The scale of sufficiency ratings for bridges ranges from 0 (worst possible condition) to 100 (optimal condition).

In 1989 Marion County had 214 bridges with sufficiency ratings higher than 80.00, 180 bridges with ratings between 50.00 and 80.00, and 83 bridges below 50.00. In Washington Township there were 29 bridges with sufficiency ratings of 80.00 or higher, 29 bridges with sufficiency ratings between 50.00 to 80.00, and 8 bridges below 50.00 (see Map 3).

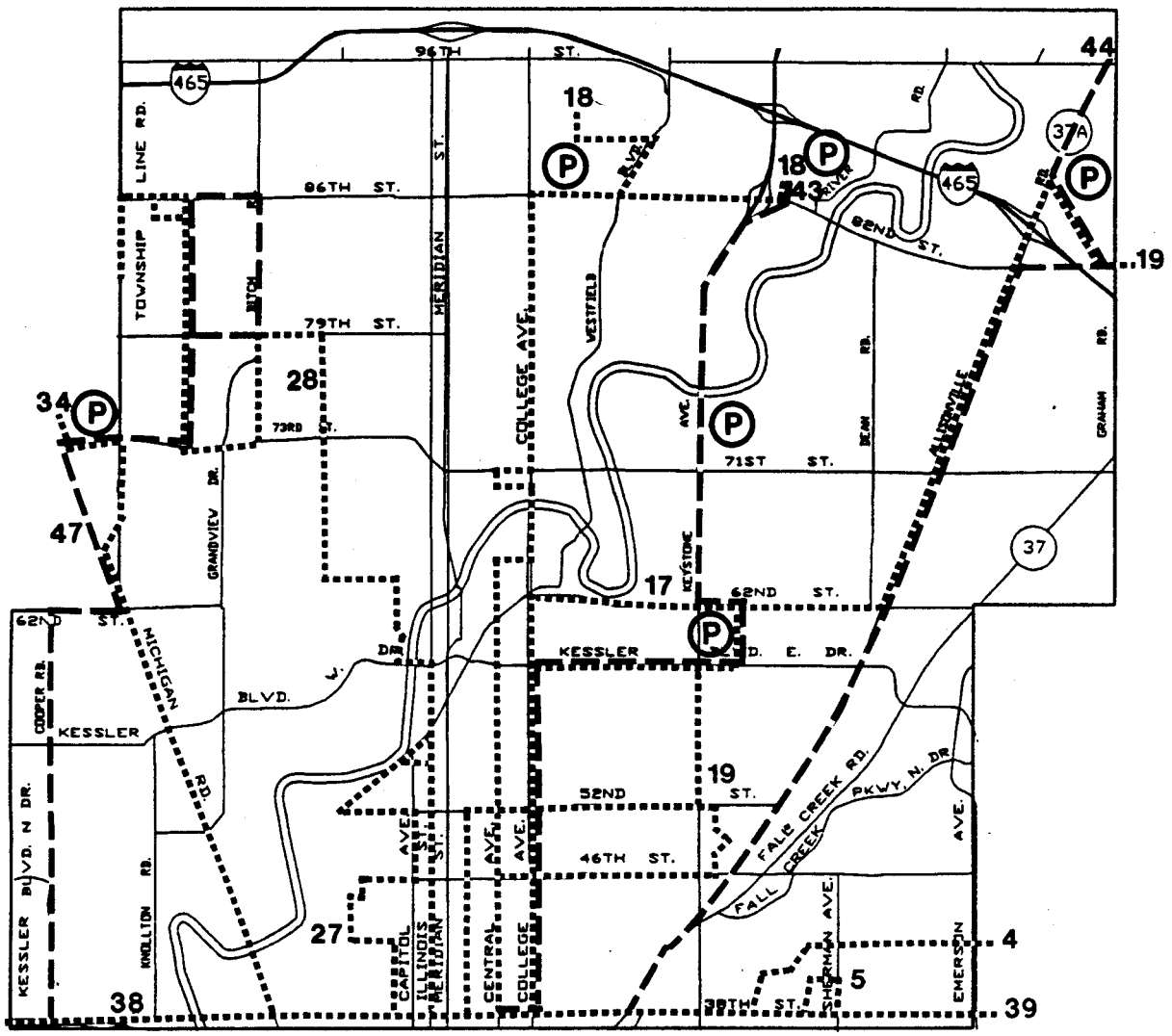
HIGH ACCIDENT LOCATIONS

Washington Township had nine of the County's fifty most dangerous intersections (as determined by accident rate) in 1990. Accident rates are determined by dividing the annual number of accidents by the estimated annual number of vehicles entering an intersection. That figure is then multiplied by one million to obtain a rate: the number of accidents per million vehicles. Therefore, an accident rate of 2.06 translates into an average of two accidents annually for an intersection averaging a volume of 1,000,000 vehicles each year.

For planning purposes, intersections having an accident rate greater than 2.00 are identified as "trouble spots" needing further study. In 1990, 13 intersections in Washington Township had an accident rate greater than 2.00. The ten intersections with the highest accident rates are shown on Map 4. These intersections can be examined to determine what measures can be employed to increase safety. Measures such as adding left turn lanes or left turn signals, adding appropriate signage, or providing new lighting may lead to an appreciable reduction in a particular intersection's accident rate.

NEEDS ASSESSMENT

The management of Indianapolis' transportation system is based on the allocation of limited resources--there are more needs associated with the transportation system than money available to make all the desired improvements. The purpose of the City's transportation planning process is to assess the needs of the transportation system (its users) and develop a systematic program to allocate the limited financial resources.



MAP 2
WASHINGTON TOWNSHIP

METRO BUS ROUTES

Local routes

Express routes

Park and Ride

THE PREPARATION OF THIS MAP
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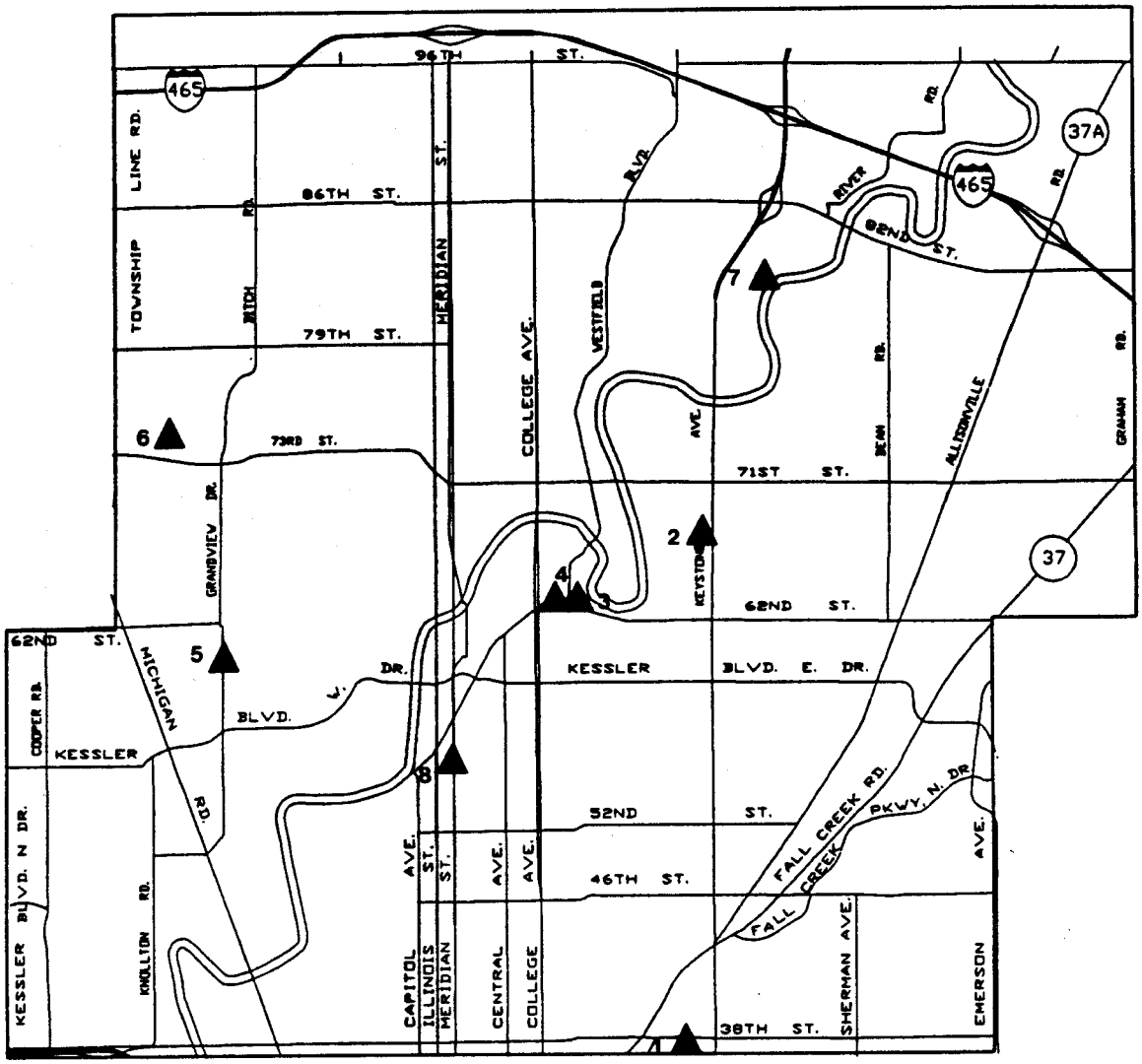
FEBRUARY, 1993
DEPARTMENT OF METROPOLITAN DEVELOPMENT
DIVISION OF PLANNING
INDIANAPOLIS–MARION COUNTY, INDIANA



MAP 3
WASHINGTON TOWNSHIP

BRIDGES WITH SUFFICIENCY RATINGS OF 50 OR LESS

1. E. Fall Creek/39th St. (27.3)
2. Baily Creek/Evanston Ave. (34.4)
3. I.W.C. Canal/Guilford Ave. (47.1)
4. I.W.C. Canal/Parking lot (27.1)
5. Crooked Creek/Fox Hill Dr. (43.5)
6. Crooked Creek/Manchester Dr. (42.0)
7. Haverstick Creek/Haverstick Rd. (27.0)
8. I.W.C. Canal/Illinois St. (50.0)

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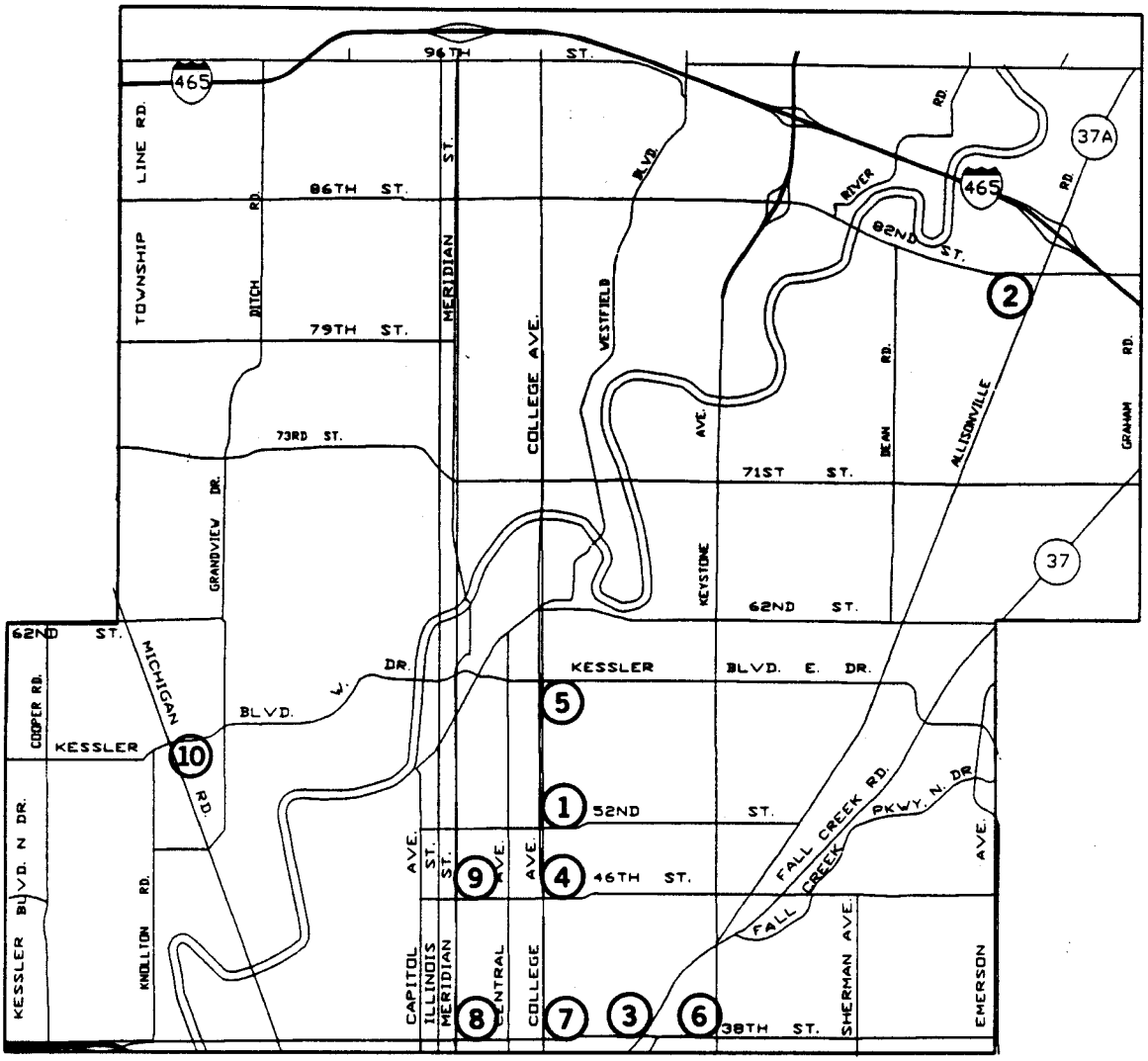

MAP 4
WASHINGTON TOWNSHIP

HIGHEST ACCIDENT INTERSECTIONS, 1990

Rank	Intersection	Rate	Total # Accid.
1	College at 52nd	3.81	28
2	Allisonville at 82nd	3.2	66
3	Fall Creek at 38th	3.14	66
4	College at 46th	3.02	28
5	College at Kessler	2.86	32
6	Keystone at 38th	2.82	46
7	College at 38th	2.76	42
8	Meridian at 38th	2.56	48
9	Meridian at 46th	2.4	24
10	Michigan at Kessler	2.4	29

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FEBRUARY, 1993
DEPARTMENT OF METROPOLITAN DEVELOPMENT
DIVISION OF PLANNING
INDIANAPOLIS-MARION COUNTY, INDIANA

THE TRANSPORTATION PLANNING PROCESS

Transportation agencies which request the use of federal funds for projects are required to be documented in the Indianapolis Regional Transportation Improvement Program (IRTIP). This report is prepared annually and identifies a five-year program of proposed transportation projects in the Indianapolis urbanized area.

The transportation planning program in the Indianapolis area is comprised of two major elements: Long-Range Transportation Planning and Transportation System Management (TSM) Planning, which identifies short-range transportation improvements.

The Long-Range Transportation Planning element prepares and maintains The Official Thoroughfare Plan for the Indianapolis urbanized area. The plan identifies transportation needs twenty years into the future, and recommends the needed roadway improvements including street widening, bridges, and new roadways. Placing a recommended roadway improvement project into the Official Thoroughfare Plan for Marion County does not ensure its construction. However, in order for the improvement to be constructed *using federal funds,* it must be included as part of the official plan. Actual construction of a project is subject to funding availability, an impact study, and community review. There are 1,040 miles of roadway on the Thoroughfare Plan (see Map 5).

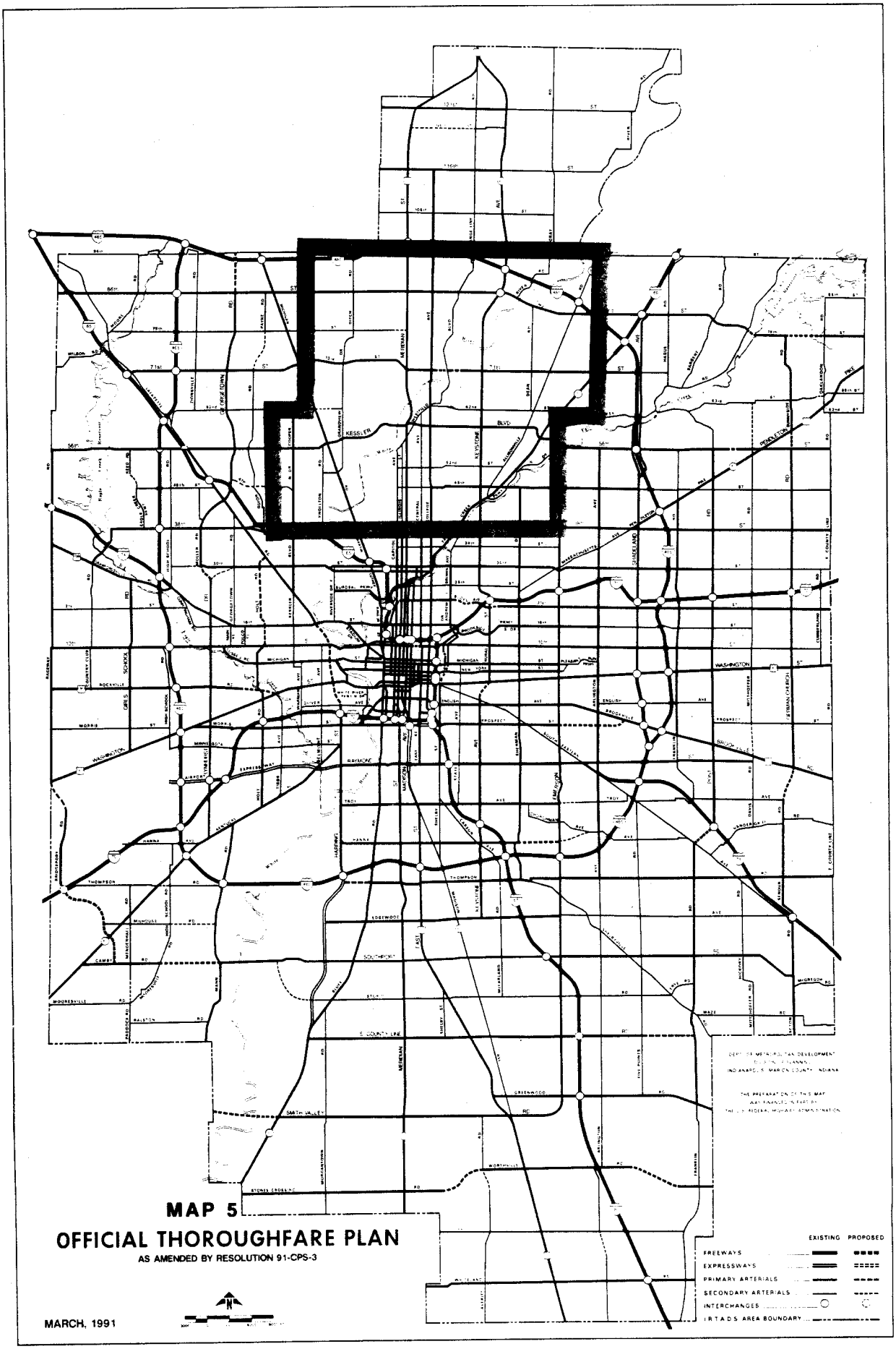
The TSM, or short-range planning element, addresses low-cost projects designed to obtain maximum productivity from the existing transportation system. Projects associated with this element include intersection improvements, signage and lighting improvements, modernizing traffic signals, and operational changes such as restrictions for on-street parking.

Projects planned for both the short-range and long-range transportation planning programs are contained in the "Planned Improvements" section of this chapter. In this Needs Assessment section, only the long-range planning process is discussed.

In planning for Washington Township's roadway system, it is necessary to analyze two basic elements: the physical configuration of the existing street network, and the current and future traffic demand of each roadway segment relative to its carrying capacity (this relationship is expressed as a measurement of level-of-service, or LOS). Both are described in the following sections.

STREET NETWORK

The Indianapolis roadway network, including Washington Township, represents a combination of two basic configurations--a spoked-wheel pattern and a basic grid system of regular squares or rectangular blocks. Ideally there would be equal spacing between each roadway in a grid pattern.


MAP 5
OFFICIAL THOROUGHFARE PLAN
AS AMENDED BY RESOLUTION 91-CPS-3
MARCH, 1991
EXISTING
PROPOSED
FREEWAYS
EXPRESSWAYS
PRIMARY ARTERIALS
SECONDARY ARTERIALS
INTERCHANGES
I R T A D S AREA BOUNDARY

Planning new roads and improving existing roads is done with consideration of the need to maximize the efficiency of the overall street network configuration. Street pattern improvements bring an increased continuity of service to the system, resulting in increased accessibility and safety, and reduced travel time and energy consumption.

CARRYING CAPACITY AND LEVEL-OF-SERVICE

Levels-of-service (LOS) are qualitative measurements of congestion based on the operational characteristics of a roadway in terms of travel speed and delays. Levels-of-service are used to identify deficiencies in the roadway network and are based on a roadway's volume to capacity ratio. Six levels of service, ranging from "A" to "F," are defined and used to analyze transportation facilities. A level-of-service A represents optimal traffic conditions, while level-of-service F represents the worst congestion. A level-of-service E or F would indicate that a roadway segment is carrying more traffic than it is designed to carry. Either the network would need to be improved to divert traffic from this segment or the segment itself would need to be improved to increase its capacity. The latter could be accomplished by adding additional travel lanes or making operational improvements such as intersection widening and signal timing improvements. Each level-of-service is described below.

LEVEL-OF-SERVICE DEFINITIONS

1. **Level-of-service "A"** represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.

2. **Level-of-service "B"** is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A. The level of comfort and convenience provided is somewhat less than at LOS A, because the presence of others in the traffic stream begins to affect individual behavior.

3. **Level-of-service "C"** is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The selection of speed is now affected by the presence of others, and maneuvering within the traffic stream requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.

4. **Level-of-service "D"** represents high-density, but stable, flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally

poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.

5. **Level-of-service "E"** represents operating conditions at or near the capacity level. All speeds are reduced to a low but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.

6. **Level-of-service "F"** is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. Level-of-service F is used to describe the operating conditions within the queue, as well as the point of the breakdown.

(These definitions are from the *Highway Capacity Manual,* Special Report 209, the Federal Highway Administration.)

FORECASTING FUTURE TRAVEL DEMAND

The most complex part of the urban transportation planning process is the forecasting of future travel demand. Essentially, this involves establishing a relationship between travel characteristics and land use activities such as housing and employment. The process relies on mathematical computer models of trip generation, trip distribution, mode choice, and trip assignment, each of which are summarized below:

- **Trip generation** is the process of estimating the number of trips generated by various urban activities. For example, the number of trips that are generated by a shopping center is quite different from the number generated by a residential subdivision.

- The **trip distribution** model determines how the beginning and endings of these trips are linked with one another.

- The **mode choice** model predicts how travel will be split between automobiles and bus service.

- The **trip assignment** model determines the paths the trips will take. For example, if a trip goes from a suburb to downtown, the model predicts which specific roads or transit routes are used.

These modeling procedures are used to forecast future travel demand and thereby identify future deficiencies in the street system. The overall model generates these forecasts in terms of the volume of traffic in relation to roadway capacity.

WASHINGTON TOWNSHIP ROADWAY NETWORK PERFORMANCE

Maps 6 and 7 identify the current levels-of-service and projected levels-of-service (for the year 2005) for Washington Township during the peak hour when the greatest demand is placed on the transportation system. These are general levels-of-service and do not reflect future intersection characteristics resulting from such improvements as exclusive right and/or left turn lanes or passing blisters, which significantly improve traffic operations.

Map 8 identifies the long range priority improvements proposed for the street system within Washington Township. These improvements represent major street improvements proposed for Washington Township based upon forecasted traffic demand to the year 2005.

The existing levels-of-service were computed using the most recent traffic count data available, which ranged from 1987 to 1990. The year 2005 levels-of-service were computed with the assumption that all of the Thoroughfare Plan priority improvements would be completed by 2005.

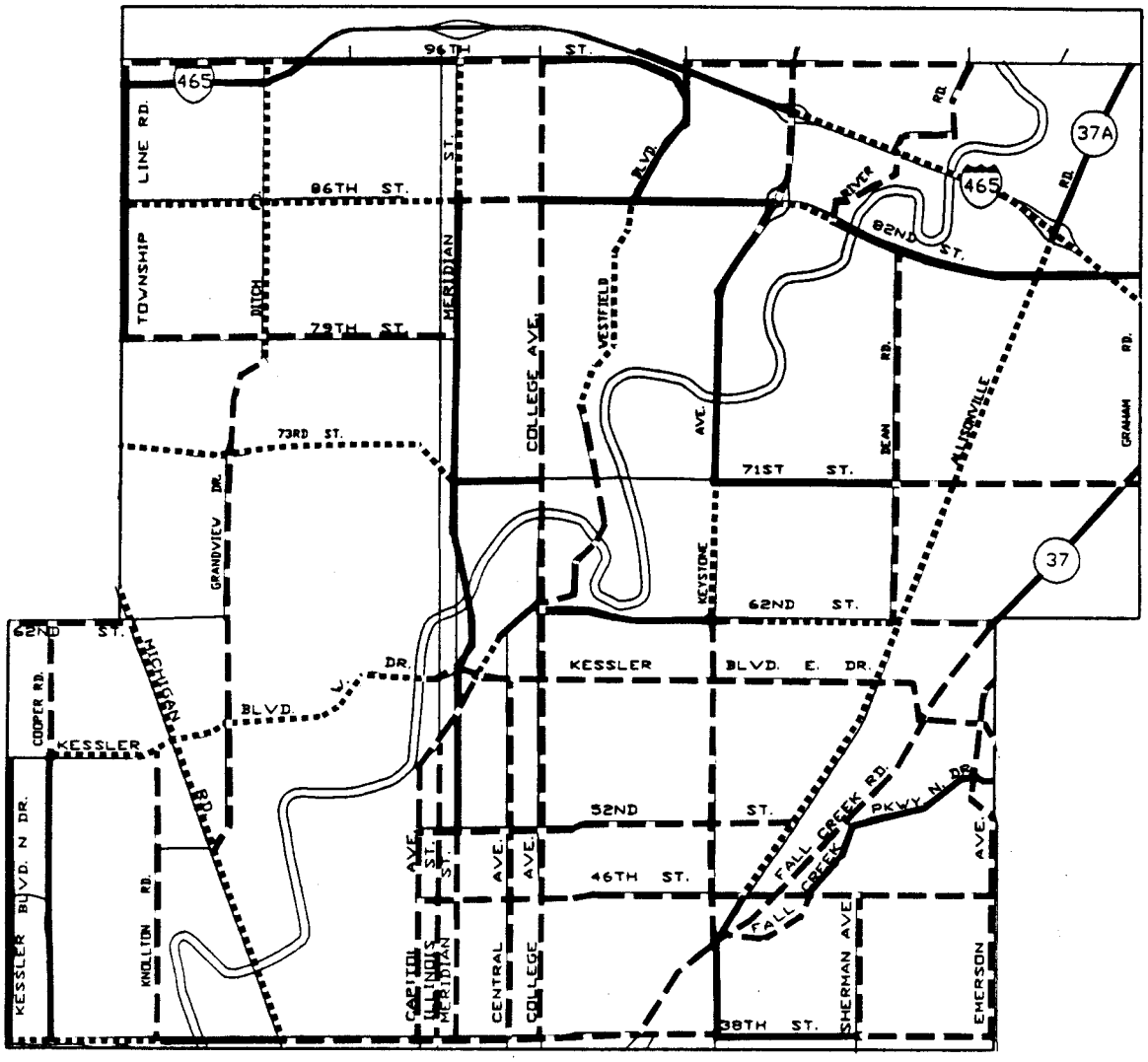
Overall, the Washington Township street system is currently operating at a fairly high level of service. Of the streets on the Official Thoroughfare Plan system, 75% are operating at level-of-service A, B, C, or D. The street segments that are operating at a level-of-service E-F are scattered somewhat throughout the Township.

It is estimated that the percentage of roadway miles operating at acceptable levels-of-service A-D will remain at roughly 75 percent. Increases in capacity gained through implementation of the priority improvements are projected to be offset by increases in traffic and congestion, resulting in a virtually identical overall LOS for year 2005 as for 1990.

PLANNED TRANSPORTATION IMPROVEMENTS

THE INDIANAPOLIS REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM

Federally funded transportation improvements for the Indianapolis Urbanized Area (as defined by the U.S. Census Bureau) are programmed through the Indianapolis Regional Transportation Improvement Program (IRTIP). A regional transportation improvement program which is endorsed by the Metropolitan Planning Organization (MPO) is



MAP 6
WASHINGTON TOWNSHIP

EXISTING LEVELS OF SERVICE

- Level of Service A or B
- Level of Service C or D
- Level of Service E or F

THE PREPARATION OF THIS MAP
WAS FINANCED IN PART BY A
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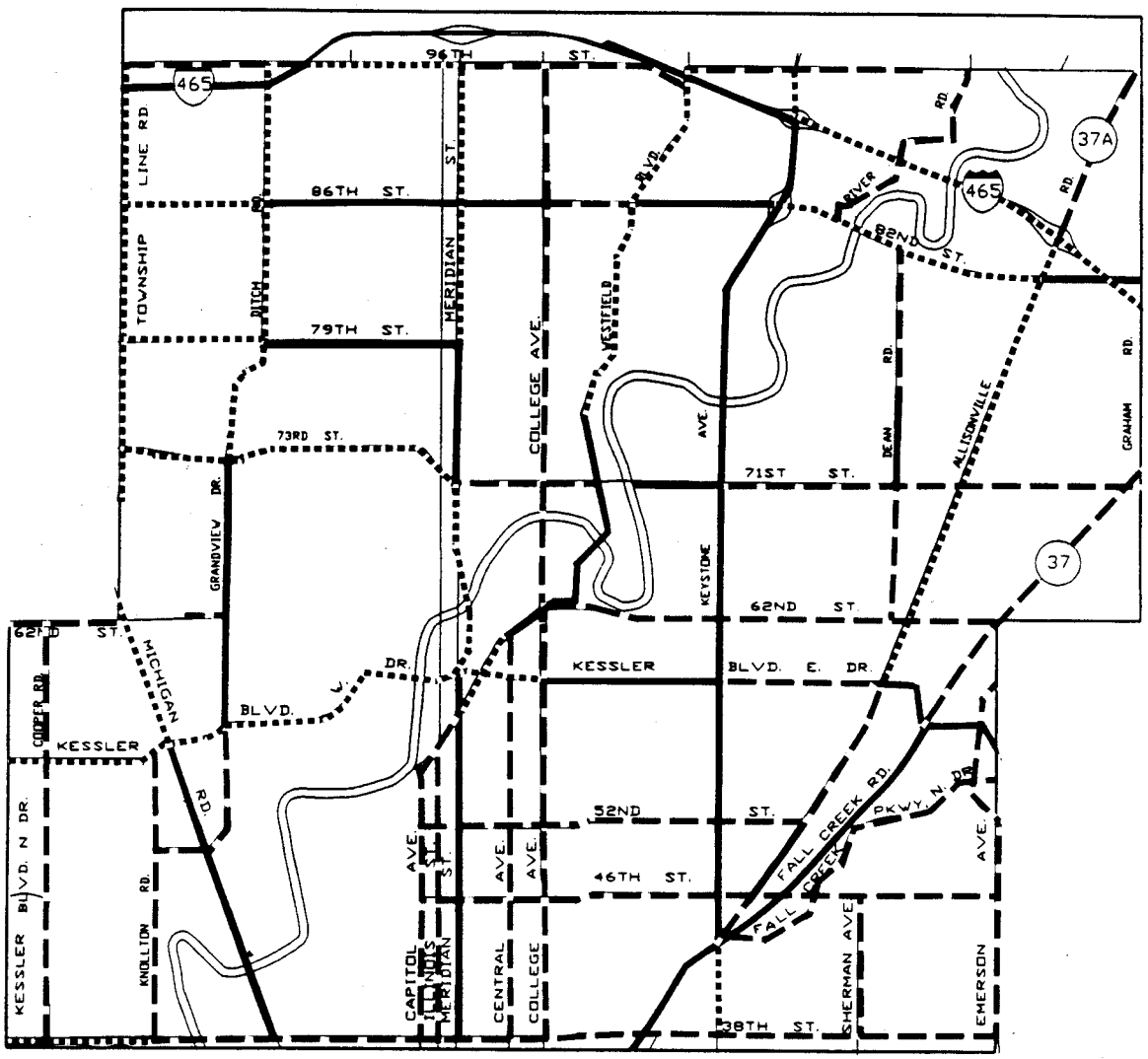
FEBRUARY, 1993
DEPARTMENT OF METROPOLITAN DEVELOPMENT
DIVISION OF PLANNING
INDIANAPOLIS-MARION COUNTY, INDIANA



MAP 7
WASHINGTON TOWNSHIP

PROJECTED LEVELS OF SERVICE, YEAR 2005

- Level of Service A or B
- Level of Service C or D
- Level of Service E or F

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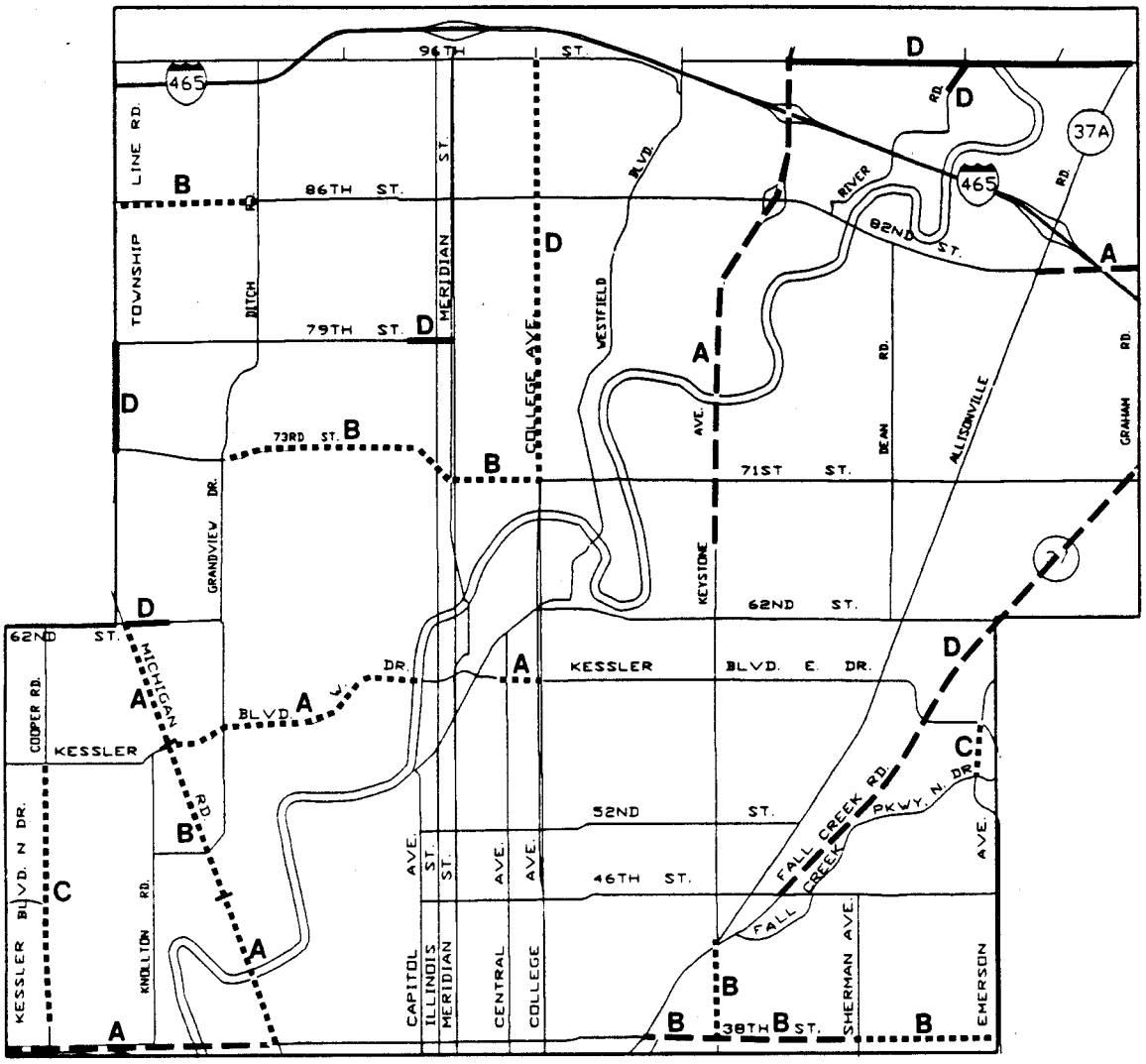

MAP 8

WASHINGTON TOWNSHIP

THOROUGHFARE PLAN PRIORITY IMPROVEMENTS

Recommended Thoroughfare Plan Improvement

- ——— New or improved to 2 lanes with 2-lane offset
- ····· New or improved to 4 lanes
- – – – New or improved to 6 lanes

Priority Range for Implementation

A = Highest Priority

D = Lowest Priority

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required for approval of Federal-Aid transportation projects in urbanized areas. The IRTIP presents transportation improvements proposed by state and city government, as well as other local transportation agencies in the Indianapolis Urbanized Area. The basic objective of the IRTIP is to provide the best attainable coordinated transportation system.

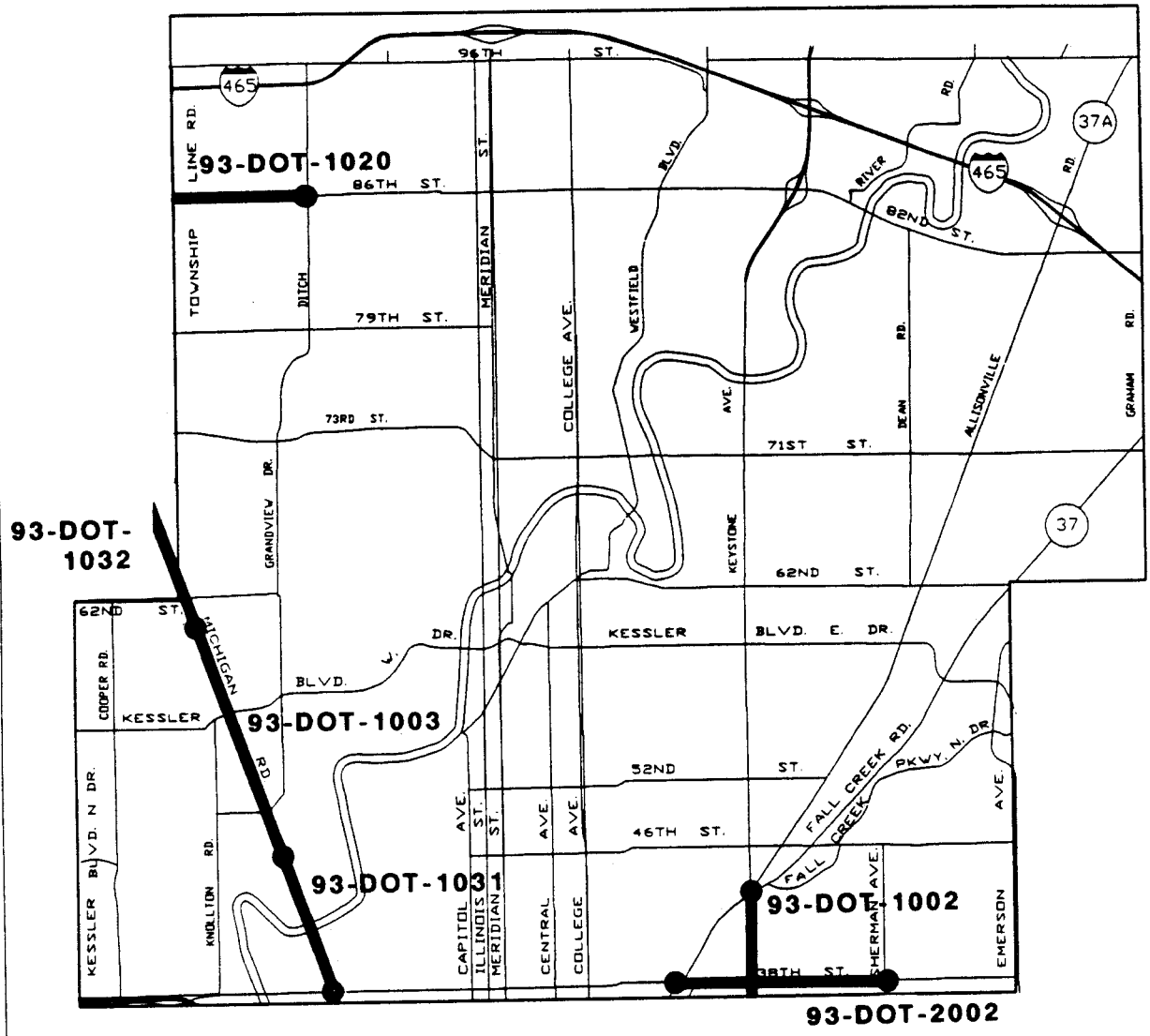
There are two planning elements that provide the principal evaluation methods for programming projects in the IRTIP. The Long-Range Transportation Plan is a plan that implements long- range transportation objectives and facilitates improvements that increase the overall capacity of the Indianapolis Transportation System. The Transportation System Management Process Report plans short-range objectives that address current trouble spots in the transportation system. An example of a long-range transportation improvement is the proposed Township Line Road connection from Westlane Road north to 79th Street. An example of a programmed short-range project is the recently installed intersection signalization at the intersection of 79th Street and Spring Mill Road.

Detailed summaries of the transportation projects proposed in Marion County (including Washington Township) during the 1993-1997 IRTIP program period can be found on pages 34 through 154 of the IRTIP. The locations of the improvements planned for Washington Township are shown on Maps 9 through 11.

THE CAPITAL IMPROVEMENTS PROGRAM

The Capital Improvements Program (CIP) for Indianapolis-Marion County differs substantially from the IRTIP in three basic respects. First, it is a three-year improvements program for all funded capital projects including those funded entirely by non-federal monies. Second, whereas the IRTIP applies to the greater Indianapolis Urbanized Area (including parts of Carmel, Greenwood, and Hendricks County), the CIP applies only to projects within Indianapolis-Marion County. Third, the CIP is intended to encompass all capital spending on all programmed infrastructure improvements which are the responsibility of Indianapolis-Marion County UNI-GOV departments, including sewers, drainage, parks, and roadway systems. The IRTIP applies only to transportation improvements.

The 1993-1995 Capital Improvements Program for Indianapolis-Marion County totals roughly $520 million, including $188 million for Department of Transportation (DOT) projects, $201 million for Department of Public Works (DPW) projects, $63 million for Department of Metropolitan Development (DMD) projects, $52 million for Department of Parks and Recreation (DPR) projects, and $15 million for Department of Public Safety (DPS) projects. The projects programmed for Washington Township are presented on Map 12.



MAP 9
WASHINGTON TOWNSHIP

IRTIP ROAD WIDENING PROJECTS, 1993-1997

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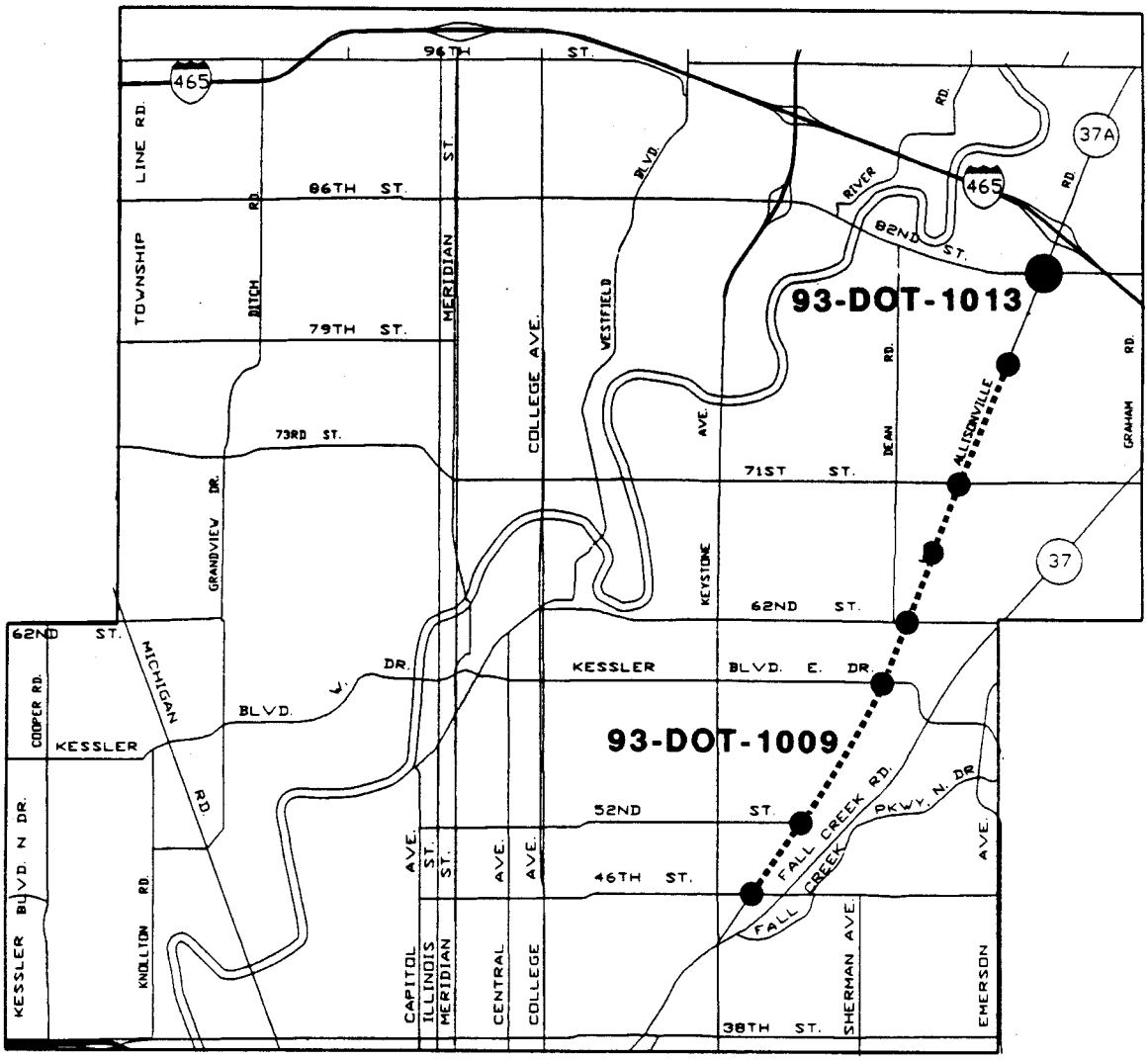

MAP 10
WASHINGTON TOWNSHIP

TSM PROJECTS: INTERSECTIONS, SIGNALIZATION, REALIGNMENT, AND LIGHTING IMPROVEMENTS, 1993-1997

Intersection Widening

Interconnection of Traffic Signals

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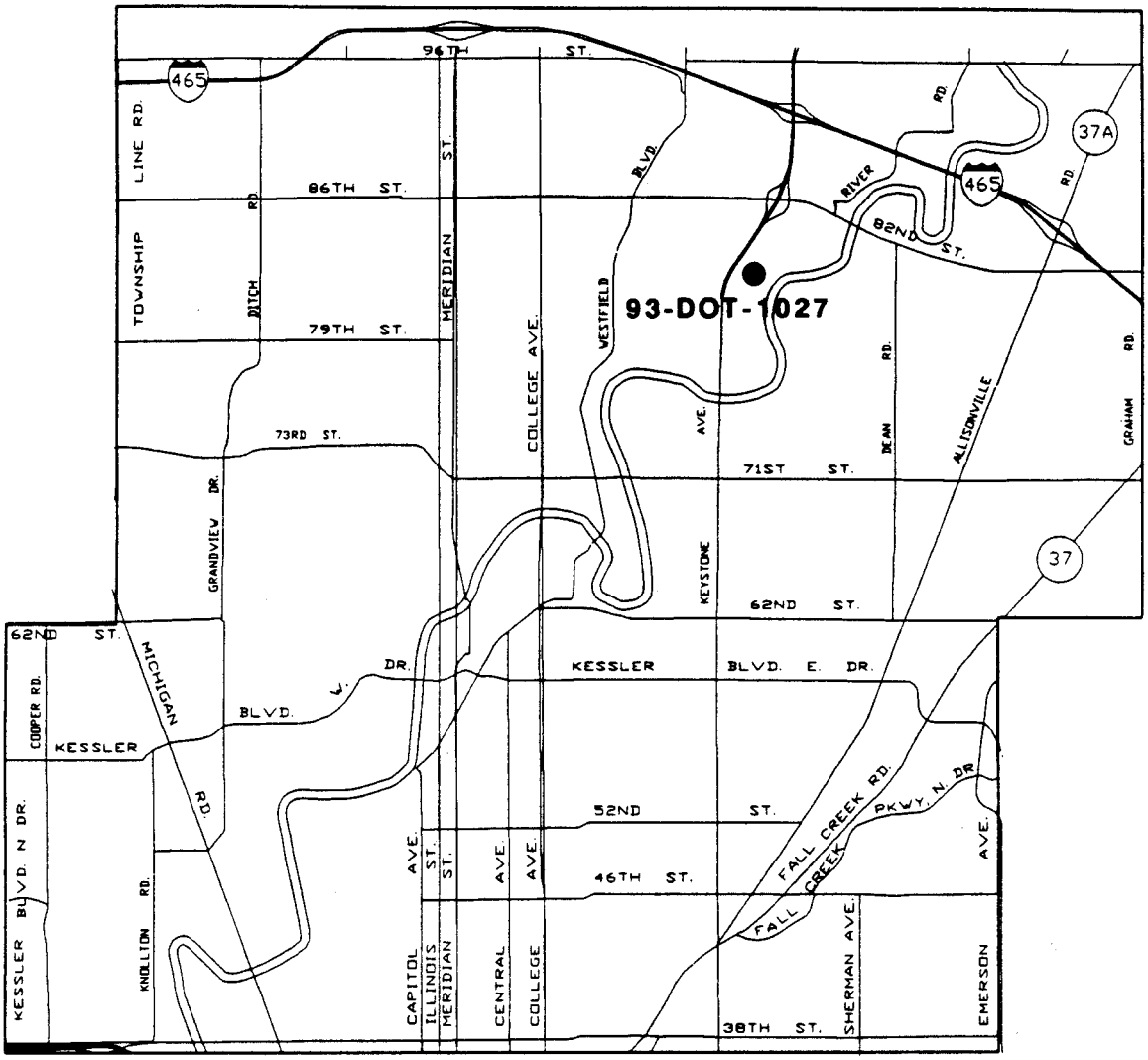

MAP 11
WASHINGTON TOWNSHIP

BRIDGE IMPROVEMENTS, 1993-1997

● Bridge Replacement - Haverstick Road over Haverstick Creek

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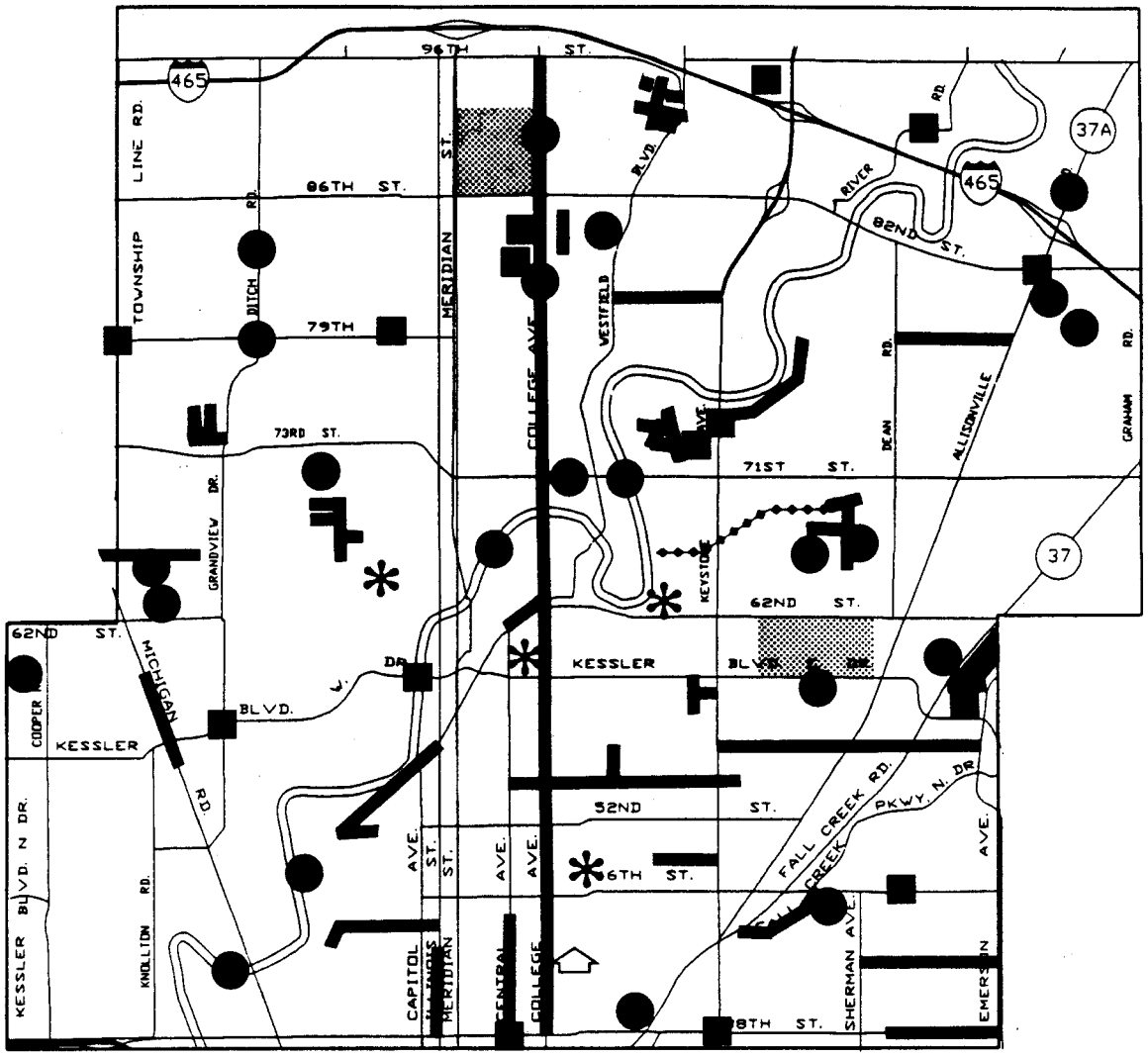

MAP 12
WASHINGTON TOWNSHIP

CIP PROJECTS, 1993-1995

- Dept. of Transportation
- Dept. of Public Works
- Dept. of Metropolitan Development
- Dept. of Parks and Recreation
- Dept. of Public Safety

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CHAPTER 6

WASHINGTON TOWNSHIP COMMUNITY SERVICES

SCHOOL SYSTEMS

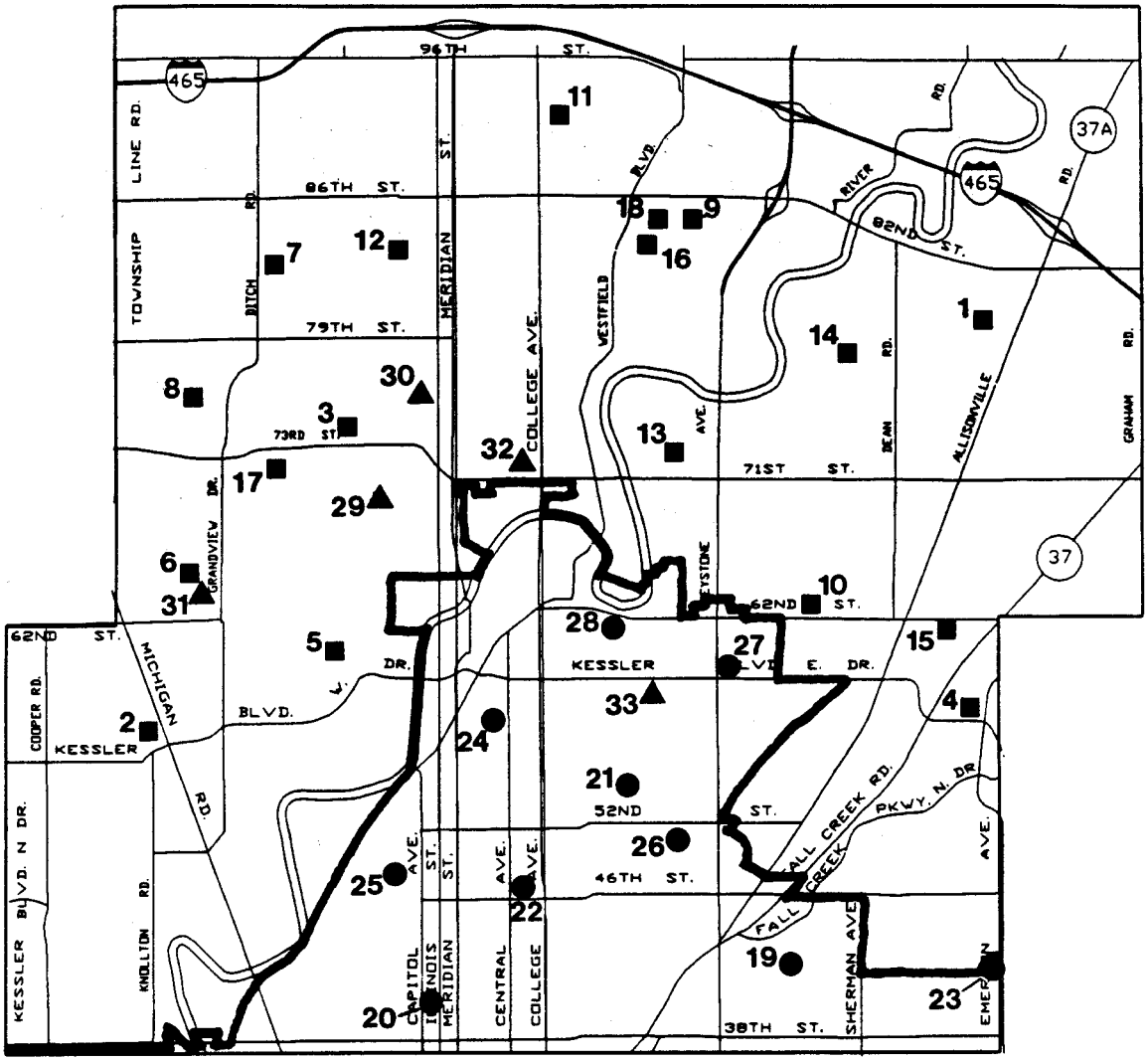
Washington Township is served by the Indianapolis Public School (IPS) District and the Metropolitan School District of Washington Township (MSDWT). In addition, several parochial and private schools are located in Washington Township (see Map 13). After closing several schools in the 1980's, the MSD of Washington Township recently opened a new elementary school, Fox Hill. The MSDWT now operates eight elementary schools, three middle schools, and one senior high school. The elementary schools had an enrollment of over 4,500 students in the fall of 1992. The MSDWT middle schools had a fall 1992 enrollment of 2,473 students and North Central High School had an enrollment of 2,799.

The IPS District boundaries are basically those of the old Indianapolis incorporated city: they generally extend north from Center Township to 71st Street (the northernmost boundary), east to the Norfolk and Western Railroad, and west to Westfield Boulevard and the White River. There are eight IPS elementary schools, one junior high, and one high school in Washington Township. The elementary school enrollment in the fall of 1992 was over 2,600, while the junior high and high school enrollments were 311 and 1,513, respectively.

Except between 1984 and 1986, the IPS District schools in Washington Township have experienced overall declining enrollments in every two-year period since 1980 (see Table 6 and Figure 8). A 7% decrease in students between 1990 and 1992 was the greatest percentage decrease in Washington Township's IPS enrollment since a 9% drop-off between 1978 and 1980.

Similar to the IPS trend, MSDWT school enrollment decreased steadily in the early and mid-1980's. Between 1988 and 1992, however, MSDWT enrollment increased by a total of 123 students to 9,816, the highest biennial enrollment since 1984.

Washington Township's private schools include Chatard High School, the Hebrew Academy, Park Tudor, St. Luke's School, and Sycamore School. Both Chatard High School and St. Luke's School are Catholic schools. Chatard provides education for grades 9-12 while St. Luke's offers classes for grades 1-8. Park Tudor school offers classes for kindergarten through twelfth grade. Both the Hebrew Academy and Sycamore School offer classes for pre-school through eighth grade.



MAP 13

WASHINGTON TOWNSHIP

SCHOOLS

- ■ Metropolitan School District of Washington Township
- ● Indianapolis Public Schools
- ▲ Private Schools
- MSDWT/IPS Boundary

See Table 6 for school names.

Some schools have been closed and/or demolished.

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TABLE 6
ENROLLMENT OF SCHOOLS LOCATED IN WASHINGTON TOWNSHIP

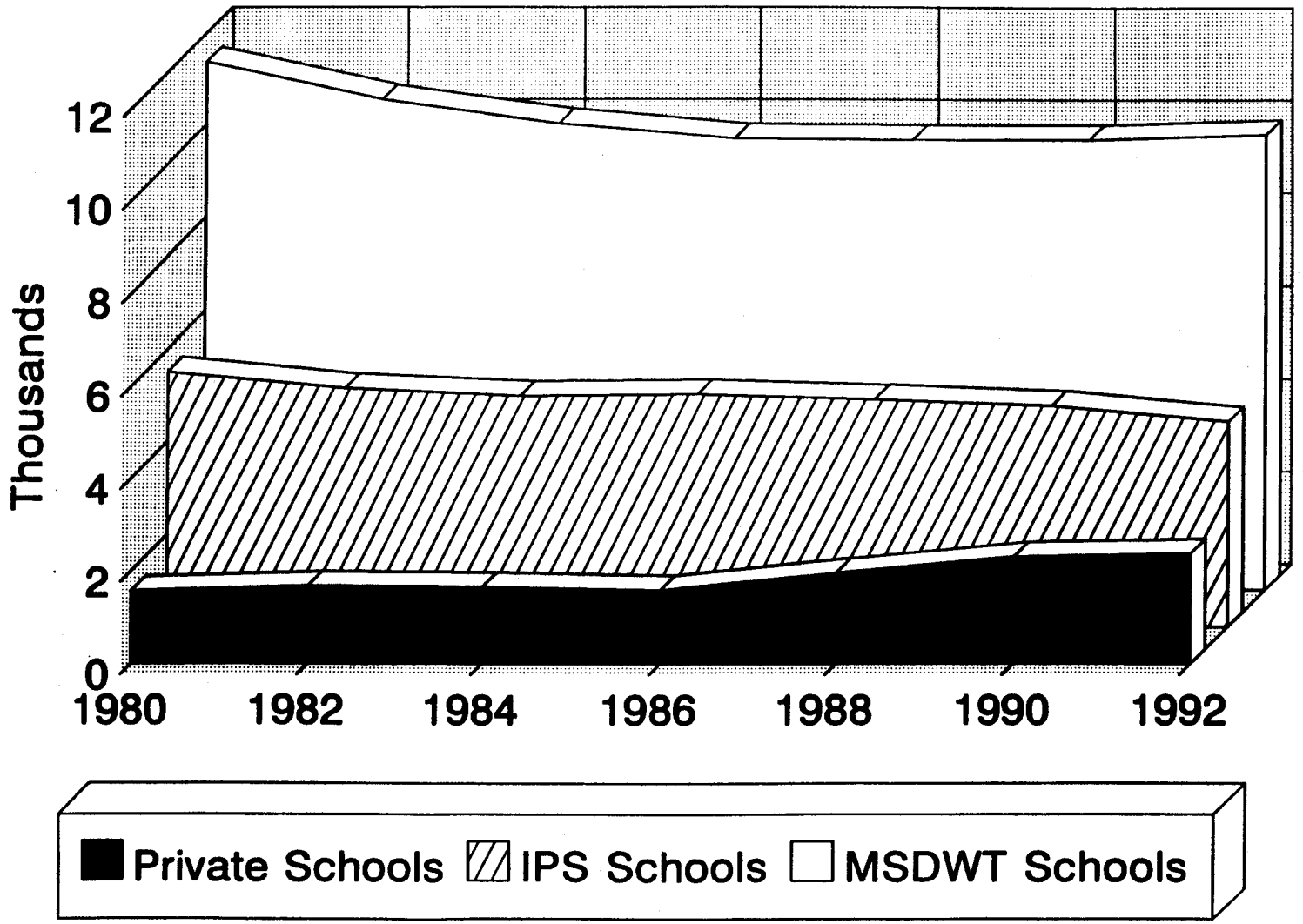
# ON MAP	SCHOOL	ENROLLMENT BY YEAR							APPROX. 1992 CAPACITY	# ABOVE OR (BELOW) CAPACITY IN 1992
		1980	1982	1984	1986	1988	1990	1992		
Washington Township (MSDWT)										
1	Allisonville Elementary	371	415	476	475	522	695	663	800	(137)
2	Crooked Creek Elementary	451	349	557	590	593	579	400	600	(200)
3	Delaware Trail Elementary*	492	0	0	0	0	0	0	NA	--
4	Fall Creek Elementary*	501	354	0	0	0	0	0	NA	--
5	Fox Hill Elementary	0	0	0	0	0	0	690	NA	--
6	Grandview Elementary*	544	469	0	0	0	0	0	NA	--
7	Greenbriar Elementary	467	440	606	622	619	628	600	650	(50)
8	Harcourt Elementary	559	516	535	508	675	689	454	750	(296)
9	Hilltop Elementary	49	37	21	23	0	0	0	NA	--
10	John Strange Elementary	480	581	540	615	679	600	508	500	8
11	Nora Elementary	413	467	628	607	592	689	640	550	90
12	Spring Mill Elementary	542	514	642	653	704	688	589	720	(131)
13	White River Elementary*	324	0	0	0	0	0	0	NA	--
14	Wyandotte Elementary*	226	0	0	0	0	0	0	NA	--
15	Eastwood Middle School	723	900	764	594	620	626	746	950	(204)
16	Northview Middle School	1042	1028	952	852	785	774	910	1000	(90)
17	Westlane Middle School	926	785	708	699	717	761	817	750	67
18	North Central High School	3268	3707	3613	3477	3187	2970	2799	3800	(1001)
	Subtotal - MSDWT Schools	11378	10562	10042	9715	9693	9699	9816	11070	(1944)
Indianapolis Public Schools										
19	IPS Elementary School #11	252	286	313	264	241	277	266	350	(84)
20	IPS Elementary School #43	472	557	431	420	431	365	336	509	(173)
21	IPS Elementary School #55	401	386	334	319	309	343	320	387	(67)
22	IPS Elementary School #70	528	337	550	481	484	556	445	623	(178)
23	IPS Elementary School #83	358	357	367	308	286	300	331	435	(104)
24	IPS Elementary School #84	490	330	513	402	422	360	281	525	(244)
25	IPS Elementary School #86	381	281	328	282	310	324	243	400	(157)
26	IPS Elementary School #91	474	300	0	322	350	373	395	450	(55)
27	IPS Junior High School #59	485	534	477	438	414	335	311	500	(189)
28	Broad Ripple High School	1657	1782	1678	1789	1669	1552	1513	2479	(966)
	Subtotal - IPS Schools	5498	5150	4991	5025	4916	4785	4441	6658	(2217)
Private Schools										
29	Hebrew Academy	142	170	195	200	199	258	274	NA	--
30	St. Luke's School	0	0	0	0	371	370	406	392	14
31	Sycamore School	0	0	0	0	0	327	356	425	(69)
32	Park Tudor	688	706	695	660	718	726	774	789	(15)
33	Chatard High School	735	798	762	726	670	640	570	800	(230)
	Subtotal - Private Schools	1565	1674	1652	1586	1958	2321	2380	2406	(300)
TOTAL FOR ALL SCHOOLS		18441	17386	16685	16326	16567	16805	16637	20134	(4461)

* - School is closed. (The Grandview Elementary School building has since been reused by Sycamore School.)
NA - No capacity figures because they are not available or school is closed.

Figure 8

Washington Township School Enrollments

Students in Private Schools, IPS Schools, and Township Schools, 1980-1992



There are a variety of specialized educational institutions also located in Washington Township, including the Indiana School for the Deaf, the Indiana School for the Blind, and Butler University. These institutions, with their expansive grounds and interesting architecture, add to Washington Township a unique character not typically found in other Marion County townships.

PUBLIC SAFETY

Washington Township public safety services are comprised of fire protection services, emergency medical services, and police protection services.

The Washington Township Fire Department and the Indianapolis Fire Department provide fire protection to the township. Map 14 shows the locations and addresses of each fire station. Ambulance service is provided to Washington Township through the township fire department from Stations 21, 23, and 24 and from Wishard Hospital for the township's Indianapolis Fire Department stations. All stations, however, have emergency medical response capabilities.

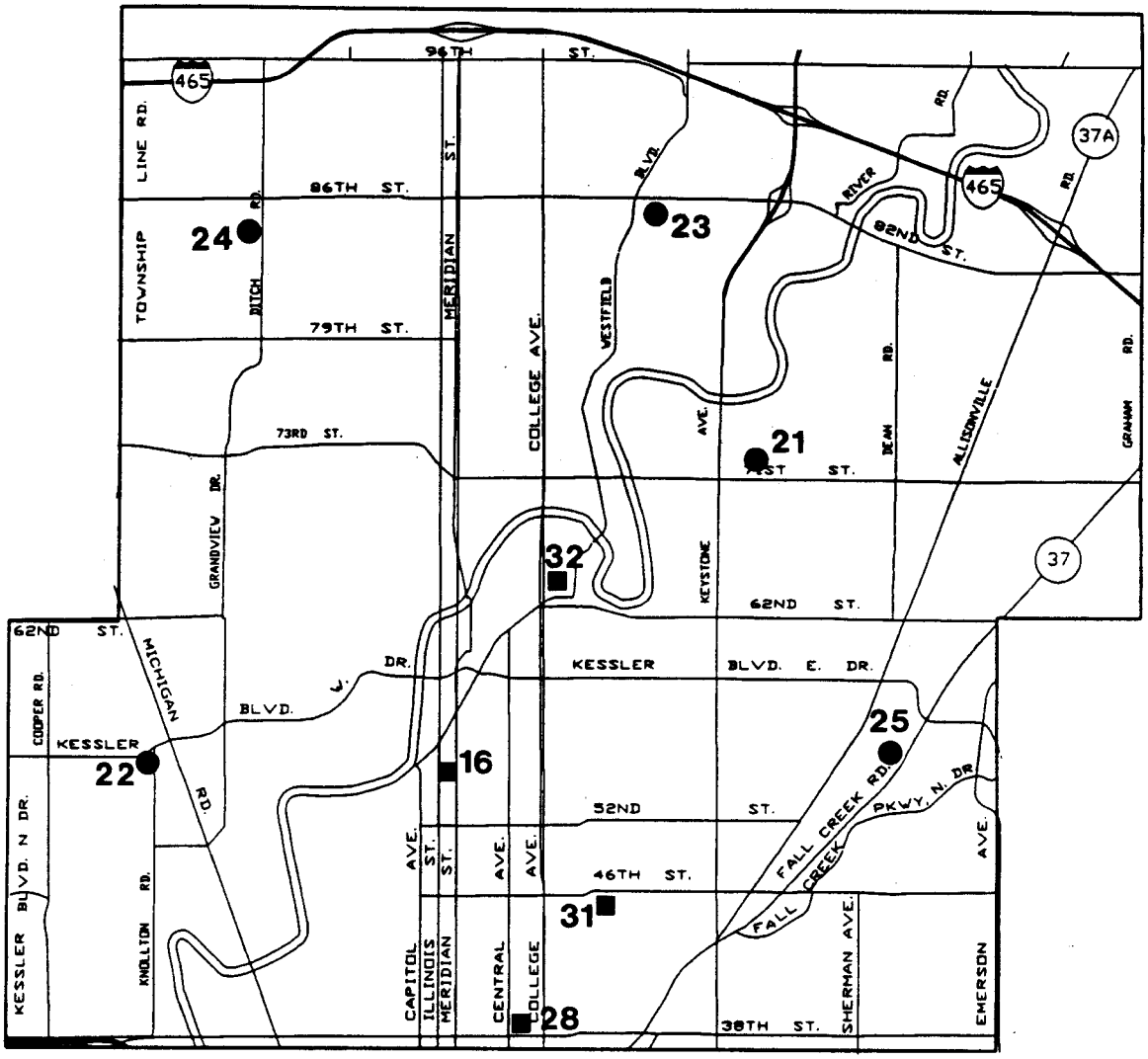
Proposed improvements to Washington Township fire service include the remodeling or rebuilding of Station 21 and a new fire station at 42nd Street and College Avenue that would replace Stations 28 and 31.

Police protection is provided to Washington Township by the Indianapolis Police Department and the Marion County Sheriff's Department. Map 15 shows the police jurisdictions. The newest Indianapolis police headquarters opened in 1989 at the northeast corner of 42nd Street and College Avenue. The Indianapolis Police Department operates a canine roll call site at Broad Ripple Park. There are many crime watch organizations in Washington Township that are coordinated by the Indianapolis Police Department. Butler University has its own police department, which is assisted by the Indianapolis Police Department when necessary.

The Marion County Sheriff's Department utilizes the former North Central High School administration building as a roll call center. There are no physical facilities, such as sheriff's precinct stations, within the township. Sheriff's service is provided through mobile patrols. In addition to these mobile patrols, town marshals are dispatched by the Sheriff's Department to Meridian Hills, Crows Nest, Williams Creek, and Rocky Ripple.

LIBRARIES

Three branches of the Indianapolis/Marion county Public Libraries are located in Washington Township. Map 16 shows the location and address of each. The new Broad Ripple library opened in 1986 and contains 70,000 volumes. The Nora library was expanded and renovated during 1989 and 1990; this library contains 90,000 volumes. The Broadway library is scheduled for renovation by 1995 and contains 20,000 volumes.



MAP 14

WASHINGTON TOWNSHIP

FIRE STATIONS

● **Township Fire Department**

Station 21, 2508 E. 71st Street
Station 22, 2151 W. Kessler Boulevard
Station 23, 1599 E. 86th Street
Station 24, 8404 Ditch Road
Station 25, 4045 E. 56th Street

■ **Indianapolis Fire Department**

Station 16, 5555 N. Illinois Street
Station 28, 512 E. 38th Street
Station 31, 1201 E. 46th Street
Station 32, 6330 N. Guilford Avenue

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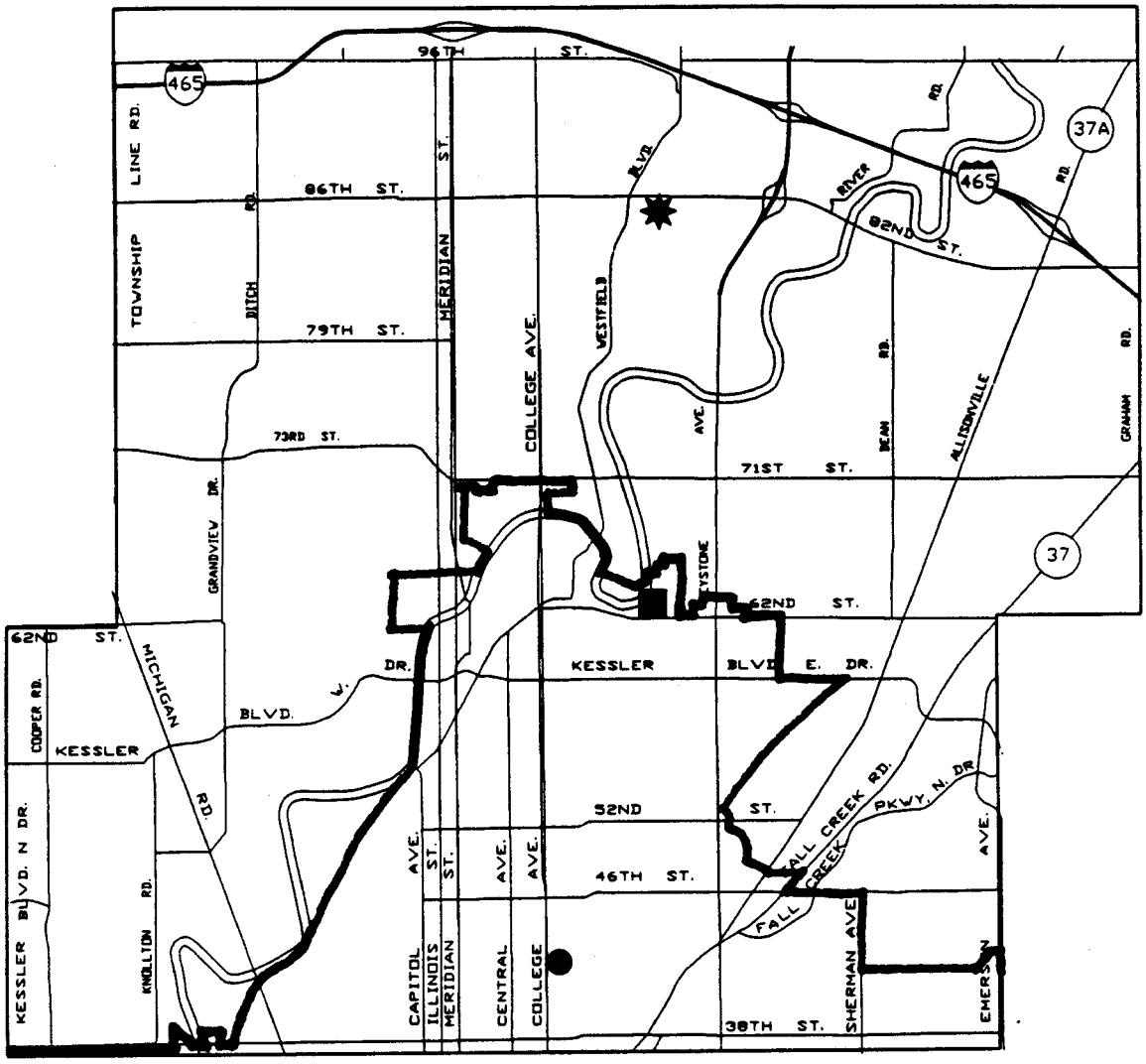

MAP 15
WASHINGTON TOWNSHIP

POLICE AND SHERIFF JURISDICTIONS, LOCATIONS

- ● Indianapolis Police Dept. North District Headquarters: 42nd Street and College Avenue
- ■ Indianapolis Police Dept. roll call site: Broad Ripple Park
- ✸ Marion County Sheriff's Dept. roll call site: Former North Central H.S. building
- IPD/Marion County Sheriff's Dept. jurisdictional boundary

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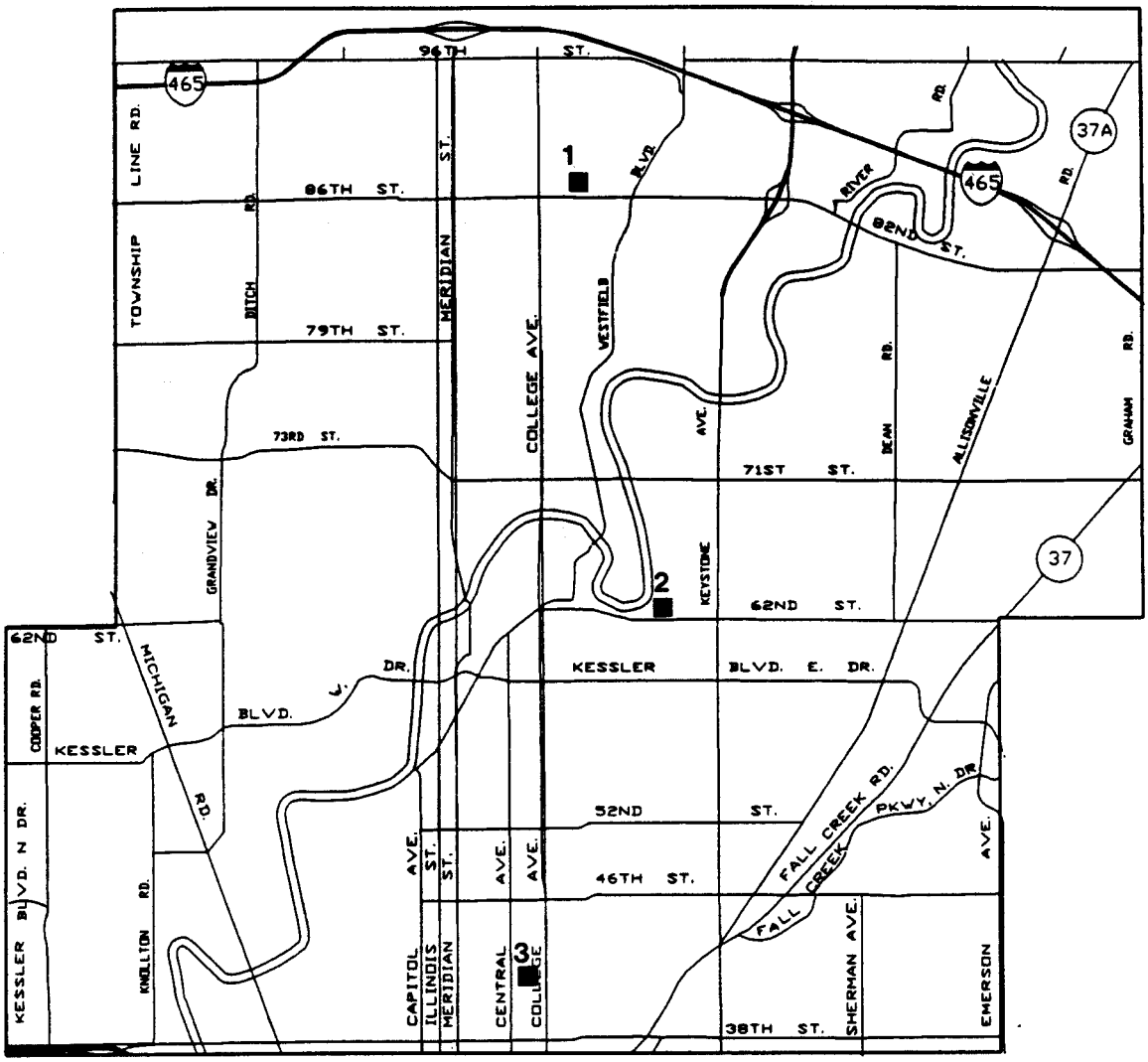

MAP 16
WASHINGTON TOWNSHIP

LIBRARIES

1. Nora Library, 8625 Guilford Avenue
2. Broad Ripple Library, 1550 Broad Ripple Avenue
3. Broadway Library, 4186 Broadway Street

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PARKS AND RECREATIONAL AREAS

Washington Township has parks of various sizes, ranging from sub-neighborhood parks to community parks. The locations of these parks are shown on Map 17. Table 7 shows each park's name and acreage. Total park acreage, shown in Table 7 as over 400 acres, is taken from the Comprehensive Parks, Recreation, and Open Space Plan for Marion County. The 270-acre figure listed for existing park use in Chapter 4 is different from total park acreage listed in this chapter because the Chapter 4 figure did not include natural and passive recreation areas in some parks.

Washington Township contains a few sub-neighborhood parks and special leisure facilities. These types of parks add to the availability and variety of parks in Washington Township. Sub-neighborhood parks are smaller in size than neighborhood parks and serve a smaller segment of the population. Typically sub-neighborhood parks contain playground equipment and are designed primarily for use by children. Special facilities in Washington Township include the Fall Creek Parkway and the Indianapolis Water Company Canal area along Westfield Boulevard. These facilities provide the community with unique, useful open space.

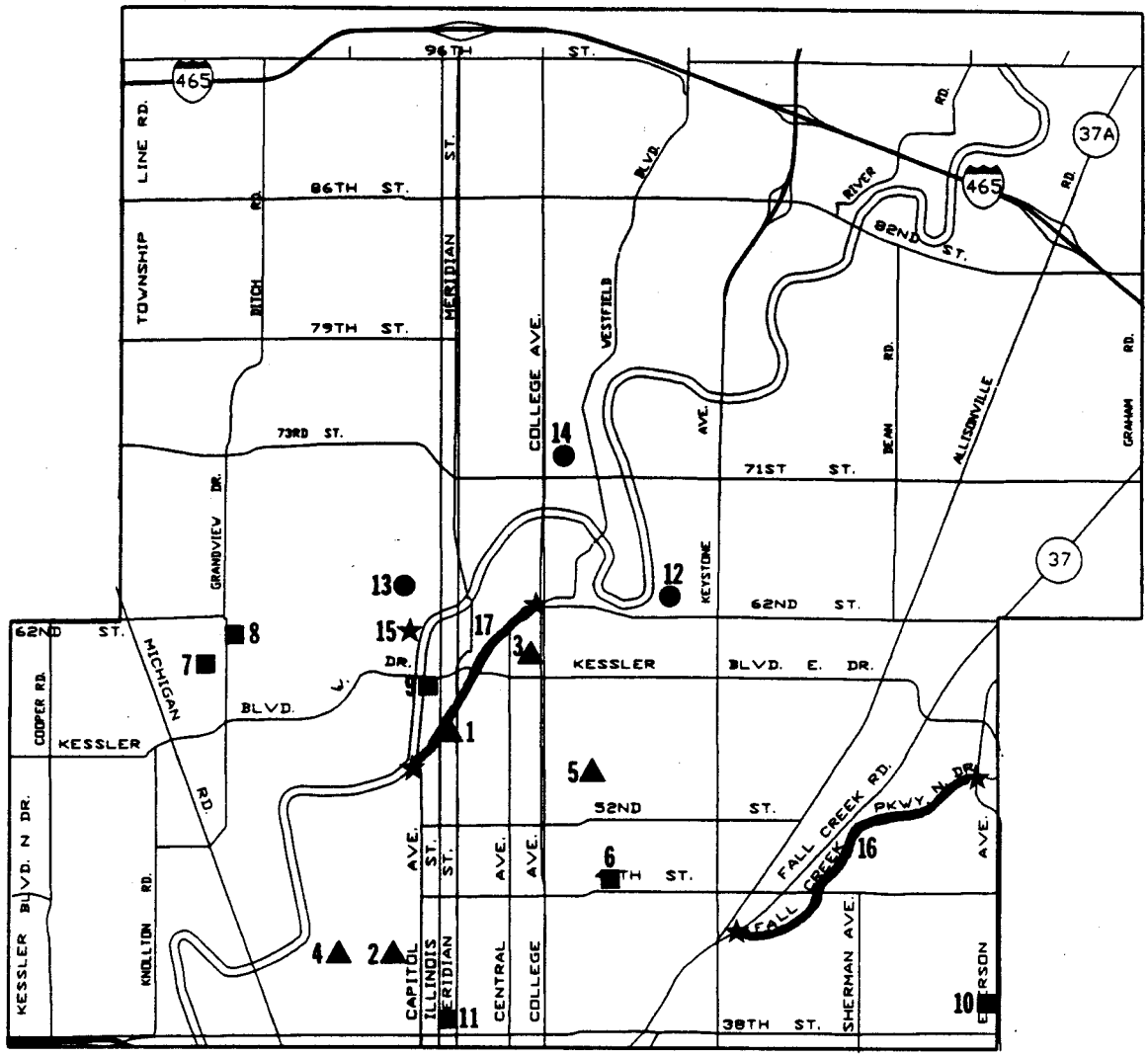
Washington Township contains a total of nearly 80 acres of neighborhood parks. A neighborhood park is designed to provide open space and serve a broad segment of the surrounding neighborhood population. The neighborhood parks are normally located within reasonable walking and biking distances of the area which they serve. Activities available at a neighborhood park can include active play and sports areas with equipment, as well as passive areas. The neighborhood park often is located adjacent to schools and neighborhood centers, away from railroads or high volume roadways.

In addition to sub-neighborhood and neighborhood parks, three community parks serve the township. These parks, Broad Ripple, Holliday, and Marott, comprise 229 acres and are designed to serve several neighborhoods. Holliday Park contains a community center and an extensive new playground. A portion of Marott Park is a state nature preserve, which has the potential for expansion. Broad Ripple Park contains a public pool, library, and small community center. All three community parks provide access to White River.

Regional parks serve a broad segment of a community's population. They typically contain features such as lakes, major rivers, or other characteristics which offer a diversity of recreational opportunities. Washington Township does not have any regional parks. The township's regional park needs are served by Sahm, Eagle Creek, and Riverside Parks.

Projections of Washington Township park needs were made based upon the full development population projection for the township. The projections indicate that unless more park space is made available, there will be a 1,515-acre deficit of park land, an increase over the current deficit of approximately 500 acres.

The needs assessment does not include the private golf courses, country clubs and other recreational facilities in Washington Township. These facilities typically are not open to the



MAP 17
WASHINGTON TOWNSHIP

PARKS AND RECREATIONAL AREAS

- ▲ Sub-neighborhood Park
- ■ Neighborhood Park
- ● Community Park
- ★ Special Leisure Facility

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Table 7

Washington Township Park Inventory

# on Map	Park Name	Park Location	Type of Park	Acreage of Park
1	Alice Carter Place	5700 N. Meridian St.	Sub-Neighborhood	1.3
2	Andrew Ramsey	310 W. 42nd St.	Sub-Neighborhood	2.0
3	Broadway & 61st	6051 N. Broadway St.	Sub-Neighborhood	2.6
4	Butler Water Tower	4200 Crown St.	Sub-Neighborhood	0.2
5	Canterburry	5600 N. Carvel Ave.	Sub-Neighborhood	2.0
6	Arsenal	1400 E. 46th St.	Neighborhood	13.0
7	Fox Hill Manor	5900 Woodside Dr.	Neighborhood	8.1
8	Juan Solomon	6100 Grandview Dr.	Neighborhood	23.8
9	Kessler & Illinois	5670 Stonehill Dr.	Neighborhood	14.1
10	Roselawn	5000 Roselawn Ave.	Neighborhood	10.0
11	Tarkington	45 W. 40th St.	Neighborhood	10.5
12	Broad Ripple	1500 Broad Ripple Ave.	Community	60.0
13	Holliday	6349 Spring Mill Rd.	Community	83.2
14	Marott	7350 N. College Ave.	Community	86.2
15	Crow's Nest Entrance	5935 Spring Mill Rd.	Special Facility	0.2
16	Fall Creek Parkway	S.R. 37-Emerson Ave. along Fall Creek	Special Facility	75.0
17	Westfield Blvd. (IWC Canal)	56th St.-College Ave. along Westfield	Special Facility	10.9
			Total park acreage	403.1

general public and therefore do not serve the entire population. Therefore, despite the presence of private open space and recreation in Washington Township, the community could experience an increase in the demand placed upon existing parks if no new public park areas are established to accommodate the increase in population.

CHAPTER 7

WASHINGTON TOWNSHIP DEVELOPMENT DETERMINANTS

A number of natural and man-made factors influence the amount, type, and direction of development in a community. These factors are called development determinants. Seven development determinants are described in this chapter: soils, sanitary sewer systems, water service, gas service, drainage systems, flood hazard areas, and environmentally sensitive areas. A seventh determinant, the Indianapolis roadway system, was presented in Chapter 5.

SOILS

In developing portions of Marion County, a fundamental factor to be considered prior to urban development is the soil's capability to accommodate development with a minimum of adverse economic and environmental consequences.

In 1969, a Soil and Water Conservation District (SWCD) was established in Marion County to promote soil and water conservation. The SWCD receives technical assistance from the United States Department of Agriculture, Soil Conservation Service (SCS). One of the major accomplishments of the SWCD was the identification and mapping of soils within Marion County (completed in 1974). The *Soil Survey of Marion County, Indiana,* issued by SCS in 1978, was an important source of information for this chapter.

In the *Soil Survey,* the SCS rated all soils' urban development potential according to their suitability for septic tank absorption fields and structural foundations. Suitability was based primarily on soil characteristics such as (1) natural drainage; (2) soil compressibility (an indicator of how soil will handle loads); and (3) shrink/swell potential (a determinant of whether changes in soil due to moisture will damage building foundations, basement walls, and roads). SCS rated each soil type for its building site development limitations under the following categories:

slight: soils are favorable and limitations are minor and easily overcome;

moderate: soils are unfavorable but limitations can be overcome by special planning and design; and

severe: soils are so unfavorable that special designs or intensive maintenance are required.

INADEQUACY OF SOILS DATA ALONE

1. The soils data provided by the SWCD does not eliminate the need for on-site testing, evaluation, and planning before design and construction takes place on a specific site.

2. Soil areas too small to delineate (generally, less than two acres) may occur within another soil mapping area. Therefore, more detailed site evaluation is required if small sites are to be developed.

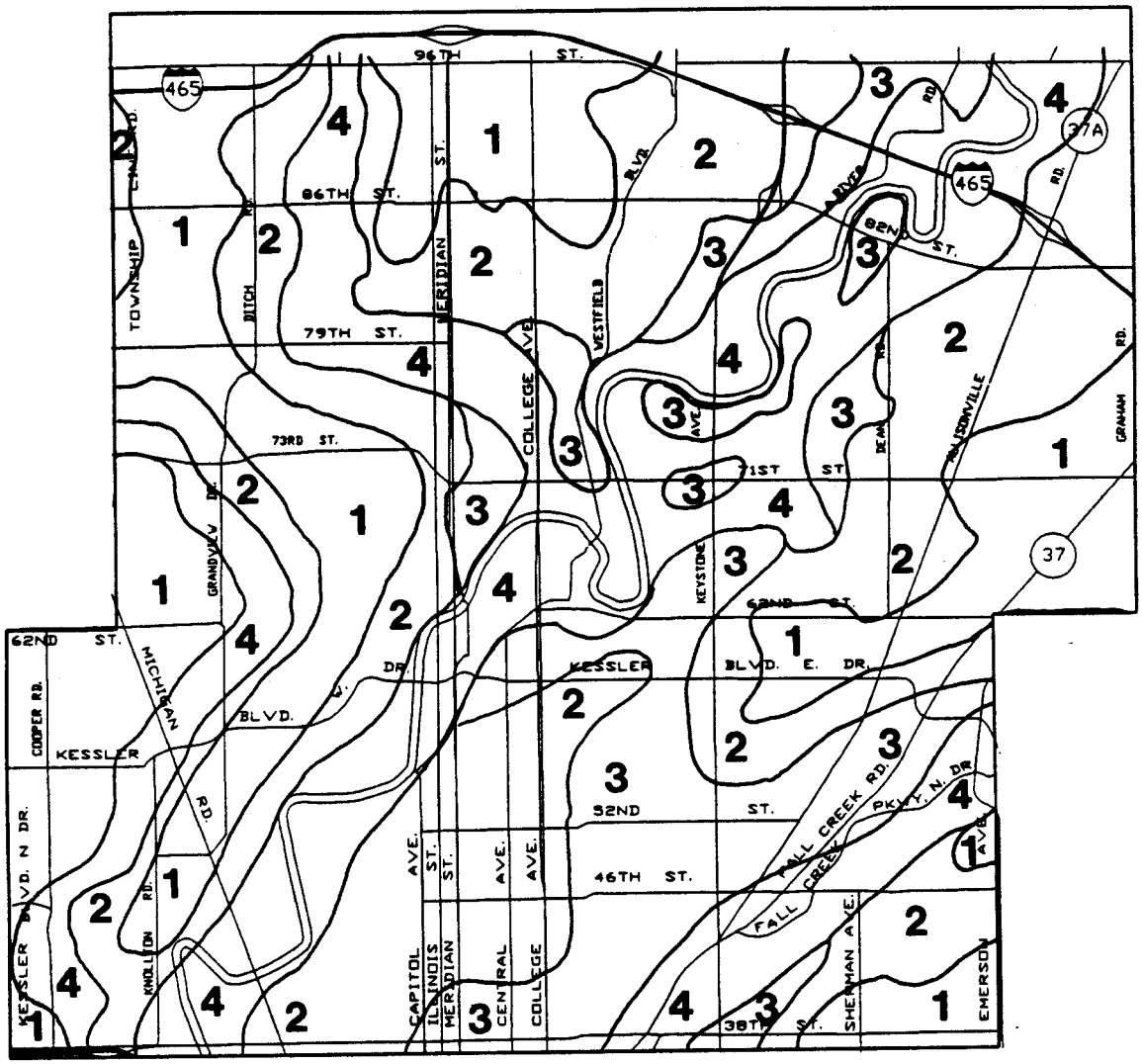
3. Through the application of proper design and construction techniques, it is possible to overcome many of the limitations of a soil for a specific use.

CHARTING AND MAPPING OF SOILS

A soil association is a distinctive pattern of soil in defined proportions. The 24 different soil types identified in Marion County can be grouped into four major soil associations, an arrangement which sacrifices some of the detail but presents an overall picture of the township's soil characteristics. This generalized picture is important for broad planning issues such as transportation corridors, development densities, or comparison of geographic areas. Map 18 provides the general soil associations characteristic of Washington Township.

The soil map indicates that 38% of the soil in the township is the Miami-Crosby soil association. The other three major soil associations, Crosby-Brookston, Genesee-Sloan, and Urban Land-Fox-Ockley are distributed fairly evenly throughout the township. Crosby-Brookston predominates at higher elevations, while Genesee-Sloan is located near creeks and rivers (Fall Creek, Williams Creek, Crooked Creek, and White River). As can be seen in the chart below, the three most prominent soil associations in Washington Township severely limit septic system development due to surface water ponding, slow permeability, and a high seasonal water table.

General Soil Association	% of Washington	% of Marion	Limiting Features	Limits on Septic
Crosby-Brookston	24	40	Poor drainage, wetness, ponding	Severe
Miami-Crosby	38	30	Wetness, erosion, ponding	Severe
Genesee-Sloan	22	12	Flooding, wetness, poor drainage	Severe
U.L.-Fox-Ockley	16	18	Poor filter, erosion	Slight



MAP 18
WASHINGTON TOWNSHIP

GENERAL SOIL ASSOCIATIONS

1. Crosby-Brookston
2. Miami-Crosby
3. Urban land-Fox-Ockley
4. Genesee-Sloan

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INDIANAPOLIS–MARION COUNTY, INDIANA

Overcoming these severely limiting soil characteristics requires both sanitary sewer service and associated surface water removal, both of which will prevent contamination of groundwater and drinking water supplies. Storm sewers are also needed, especially where subsurface drainage outlets are inadequate or nonexistent.

SANITARY SEWER SYSTEMS

The availability of sanitary sewers is a key factor affecting the rate and type of growth in portions of Marion County. In Washington Township, the availability of sanitary sewers is extremely important due to the unsuitability of the soils for septic systems.

INFLUENCE OF SOIL TYPES

Much of Washington Township is served by sewers (see Map 19). Most of the southwestern one-quarter, however, is not. Some of the developed areas, with the exception of the sewered areas, rely on septic sewage systems. This poses a serious problem, because the area's predominant soil types cannot adequately sustain septic systems without intensive maintenance and special design.

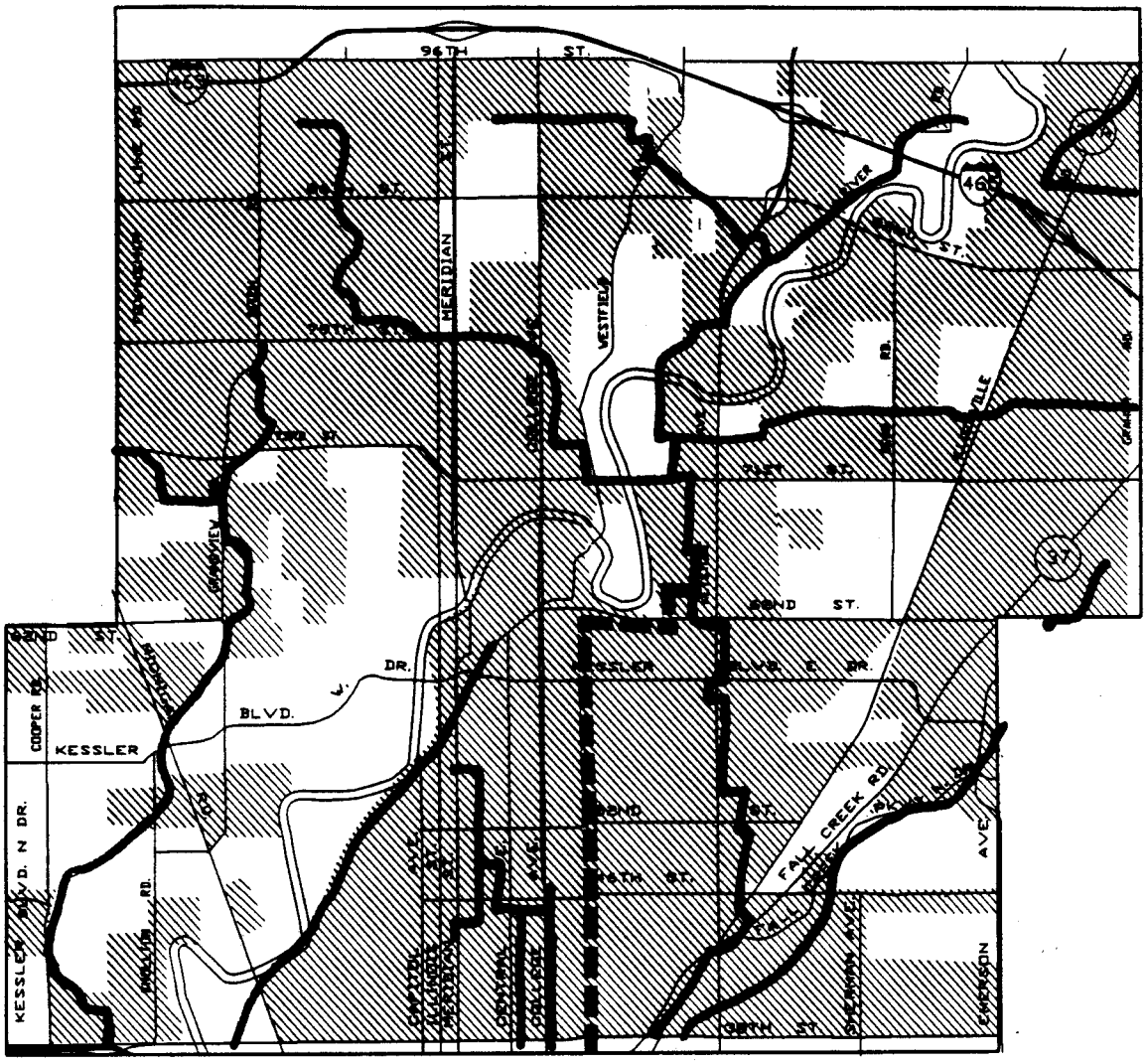
Each soil association in Washington Township poses a different problem for septic systems. Crosby-Brookston soils present severe limitations because of the presence of clay and high seasonal water tables. The clay prevents the natural absorption of the septic water by the soil. A high water table also inhibits absorption by saturating the soil and thus preventing the absorption of the septic water discharge. Both conditions result in the sewage remaining on or near the surface of the ground, where it can easily endanger the health of residents.

Miami-Crosby soils are unsuitable for septic systems because they are characterized by wetness and susceptibility to erosion. The Crosby component of this soil type has problems similar to those mentioned above. When Crosby is combined with the rolling and sometimes steeply sloped Miami soils, water tends to pond in depressions after a storm. The surface water saturates the soils and inhibits the absorption of the septic system effluent.

The Genesee-Sloan soil type severely limits the use of septic systems because of its location in floodplain areas near streams. If flooding occurs, septic systems situated in these soils fail. As floodwater recedes, it transmits the sewage into nearby streams.

PROTECTION OF SUBSURFACE WATER

In order to minimize the possibility that septic system failures could contaminate subsurface water supplies, the Indianapolis public sewer system can be extended into areas where failure is likely. Retro-fitting a network of sewer lines into an existing developed area or



MAP 19
WASHINGTON TOWNSHIP

GENERALIZED SEWER SERVICE

- Interceptor sewers
- Planned interceptor sewer
- Areas served

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subdivision is called a Barrett Law Extension. One problem with providing sewers to existing residential areas is the considerable expense that each homeowner must bear for the new sewer system. The more Washington Township residents that have already paid for and installed septic systems, the more difficult it will be to convert the area later to sewer service because the expense will have to be born by fewer homeowners.

Nearly all new residential development in Washington Township will need to include sanitary sewer connections except for lots that meet the stringent requirements for septic systems. The Marion County Health Department generally does not approve septic systems for lots smaller than one acre. Furthermore, due primarily to the poor soil associations in Washington Township, even larger lots may not meet health standards for septic systems. To be considered for approval for septic systems, even lots larger than an acre should have (1) high elevation, (2) a tendency not to pond, and (3) proximity to creeks or ditches for drains to carry groundwater away from septic system contaminants.

OTHER DEVELOPMENT DETERMINANTS

WATER SERVICE

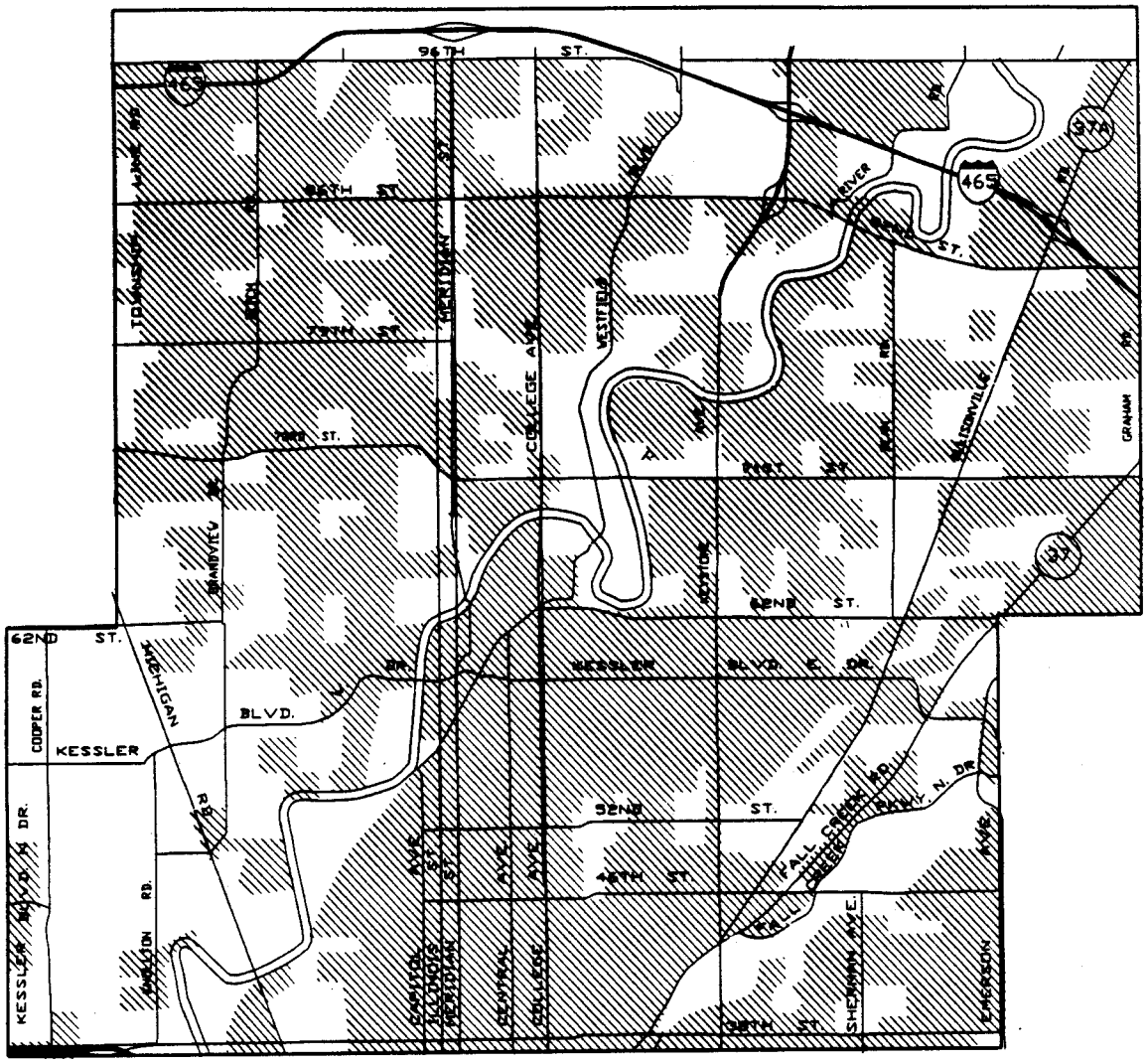
Nearly all of Washington Township, excluding the northeastern and southwestern corners, is completely served by water mains. Map 20 diagrams areas where water service is *accessible,* not necessarily where water mains are *connected.* Because private wells exist both inside and outside the general water service area, the environmental and health issues linked to septic systems--as discussed previously under "Sanitary Sewer Systems"--apply in much of the township.

GAS SERVICE

Gas service is generally accessible in the areas shown on Map 21. Because almost all of the township has gas service, this last development determinant will likely guide development less than the other five.

DRAINAGE AND FLOOD CONTROL

The water drainage system in Washington Township can be examined in light of generalized floodplains and floodways in the township (see Map 22). The term "floodplain" refers to the entire land area which would be submerged beneath floodwaters in a 100-year flood. Floodplains include floodways and the surrounding low-lying areas that hold water when the floodways overflow (floodway fringe). Development in the floodplain is allowed provided that flood protective measures for structures are first approved by the Department of Public Works and that certain land grade elevation requirements for structures are satisfied.



MAP 20
WASHINGTON TOWNSHIP

GENERALIZED WATER SERVICE

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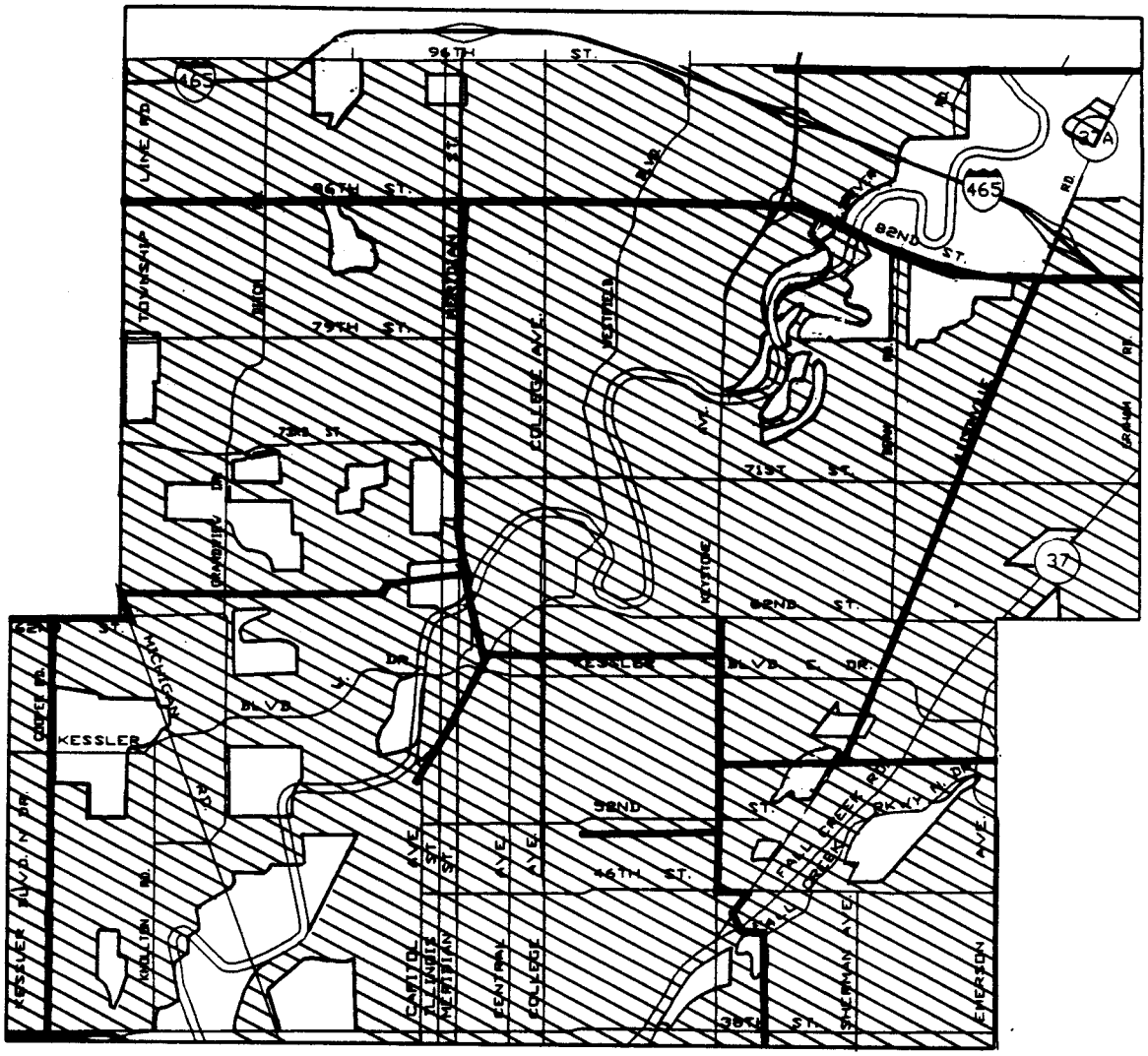

MAP 21

WASHINGTON TOWNSHIP

GENERALIZED GAS SERVICE

Natural Gas Mains

Gas Service Areas

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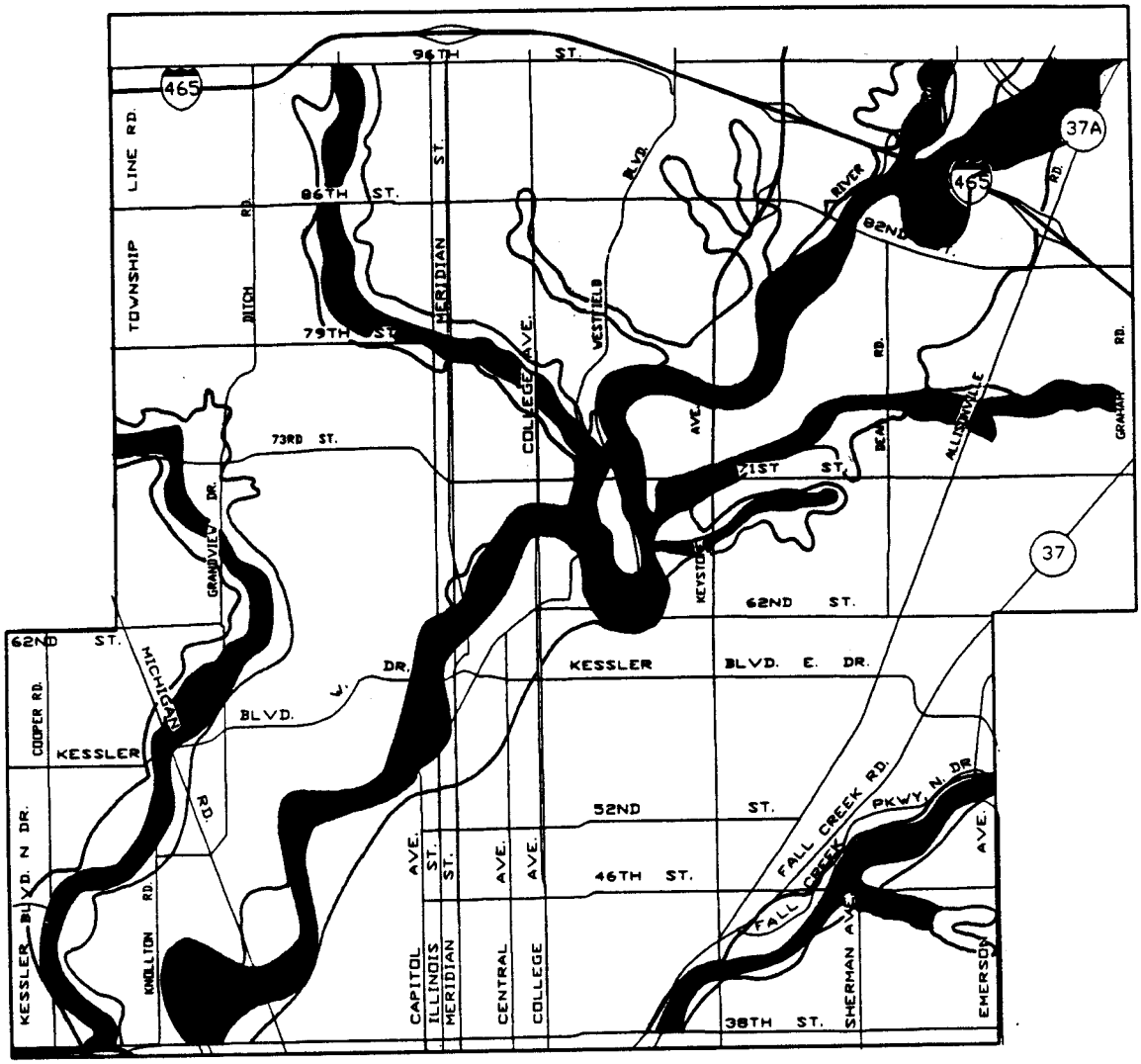

MAP 22
WASHINGTON TOWNSHIP

GENERALIZED FLOODPLAINS

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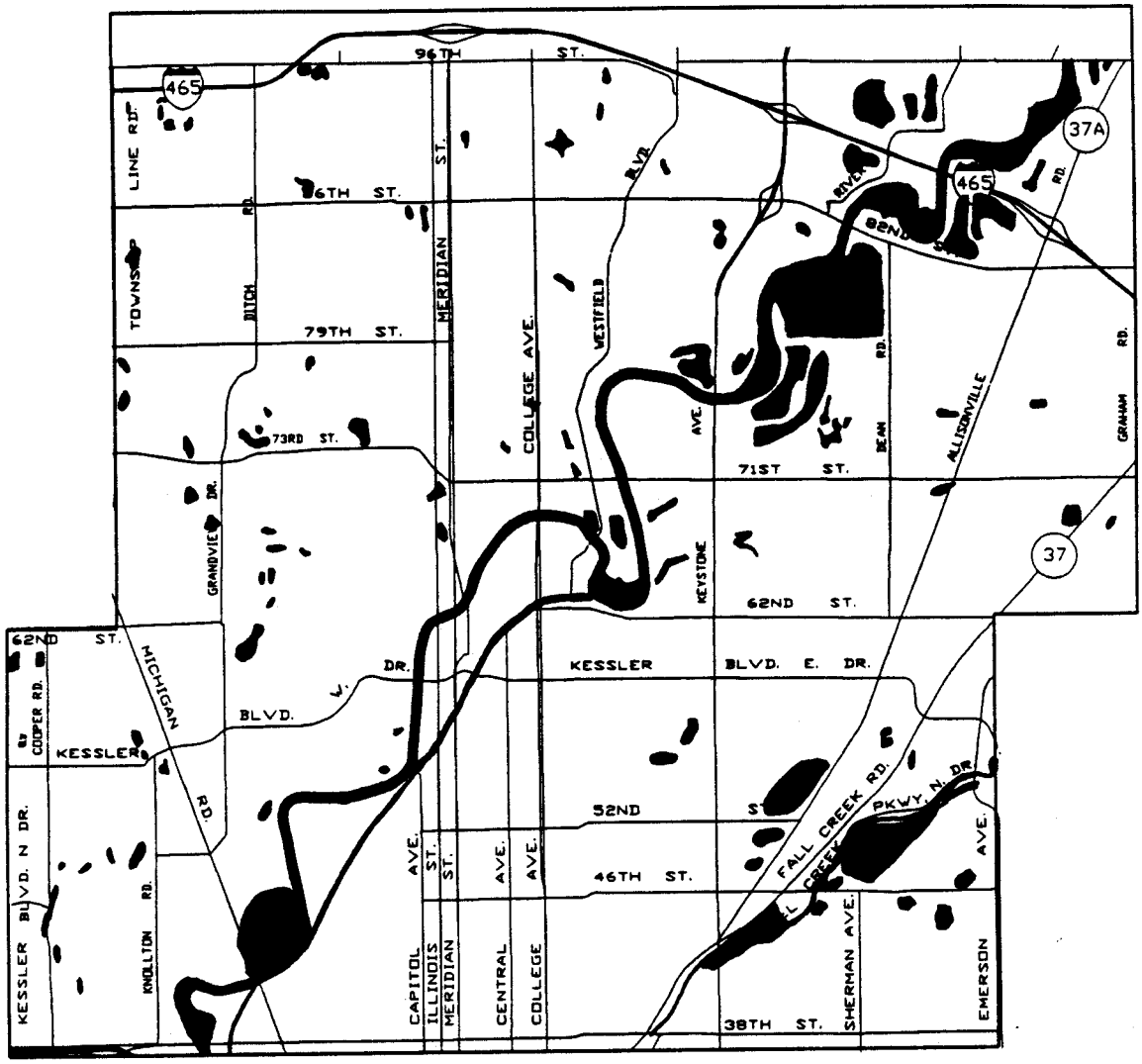
The term "floodway" refers to the stream *channel* required to conduct floodwaters downstream. Floodways are therefore usually more narrow than floodplain areas. They are protected from development and are maintained to prevent potential loss of life and damage to property as well as to maintain water quality. Only open uses and/or necessary public and semi-public uses (those dependent on proximity to surface water) are permitted in floodways.

The flood control and drainage projects shown on the CIP projects map (Map 12 on page 48) are the latest of a number of such projects undertaken in Washington Township in recent years.

ENVIRONMENTALLY SENSITIVE AREAS

The last development determinant, environmentally sensitive areas, can have an impact upon development in Washington Township. Map 23 shows general wetland areas in the township. Development of wetlands requires review and permitting by local and state agencies. Wetlands can be perceived as assets or liabilities by the township. As assets these areas can be constructively developed or preserved as parkland and/or open space. On the other hand, the presence of wetlands might preclude development.

Environmentally sensitive areas also include wooded areas (see Map 24) and areas with steep slopes or other significant natural features. Some areas with steep slopes are identified in the "Soils" section of this chapter.



MAP 23
WASHINGTON TOWNSHIP

GENERALIZED WETLANDS

Note: **Wetlands identified through U.S. Fish and Wildlife Service 1990 National Wetland Inventory Maps.**

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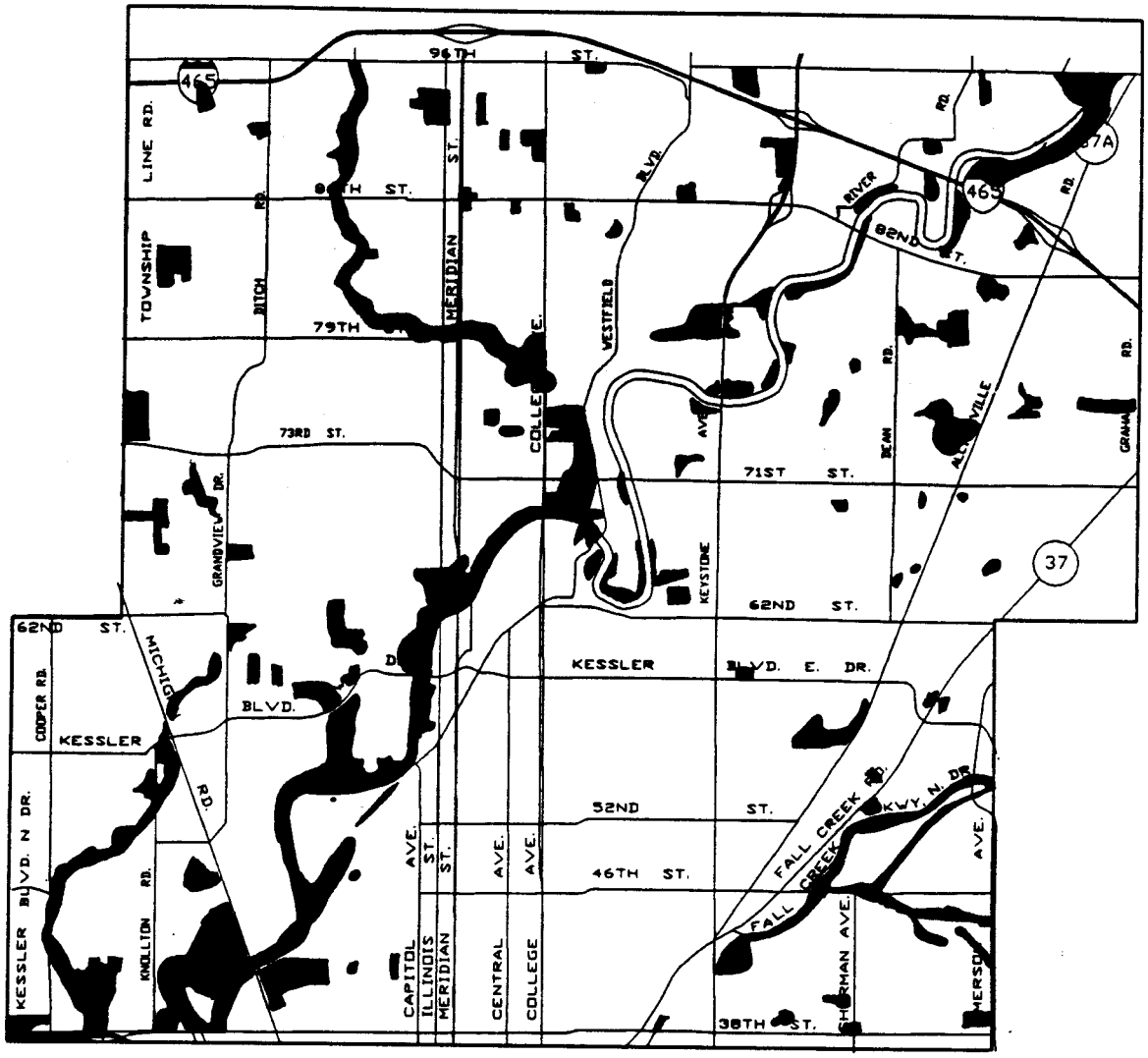

MAP 24
WASHINGTON TOWNSHIP

GENERALIZED WOODED AREAS

Note: Wooded areas identified through Planning Division 1990 aerial photographs.

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CHAPTER 8

PROJECTED CHARACTERISTICS OF WASHINGTON TOWNSHIP

One of the purposes of this document is to provide a picture of Washington Township's future in terms of its socioeconomic characteristics. This section includes the estimation of population and employment within Washington Township by utilizing land use maps, housing starts and losses data, and various U.S. Census materials. Using these sources, projections of social and economic indicators were made to create an image of Washington Township as it would exist if it were fully developed as recommended by the 1984 Comprehensive Plan. These projections are also based on the assumption that all existing uses and buildings on developed land would remain intact.

The residential element of Washington Township's future will be presented through estimates of future housing stock, number of households, and total population. The commercial element will be identified via projections of office and retail employment, total acreage of land committed to office and retail uses, and the total square footage of building space devoted to those uses. Projections of industrial employment and land use will be similarly presented.

METHODOLOGY

The first step to generate the following forecasts was to determine the acreage devoted to existing land uses through the interpretation of aerial photographs. The land use information was transposed onto township base maps, and the total acreage committed to each land use classification was calculated. The land use forecasts were then determined by adding the recommended land use acreage for all the remaining vacant parcels, as presented in the 1984 Comprehensive Plan. The underlying assumption, therefore, is that all undeveloped land will develop in accordance with the 1984 Comprehensive Plan.

The residential element of these projections was determined by multiplying the 1990 existing housing density (average number of units per acre) for both the single family and multi-family categories to the corresponding acreage of vacant land planned for each. Thus, an estimated future increase in number of units for each category was calculated. The sum of the estimated change and the total number of existing units provides a projection of total single family and total multi-family housing units at the point of full development for Washington Township.

The future commercial and industrial characteristics of Washington Township were estimated by applying an assumed average building square footage per acre to each category's total acreage. The figure was determined for Pike Township in 1987, and was judged to be a reasonable approximation of the average figure for Washington Township. The total number of undeveloped acres recommended for office, retail, and industrial use by the 1984 Comprehensive Plan were then converted to square footage of built-up space. The density (building square footage per acre) of existing commercial and industrial development was assumed to remain constant. These projections of total building space then provided a basis from which to estimate future employment.

RESIDENTIAL CHARACTERISTICS

If Washington Township were to realize full development in the manner suggested by the 1984 Comprehensive Plan, it would experience a 37% increase in total housing units over what existed in 1990. By comparison, the percentage increase for the most recent period for which data is available (1980-1990) was 21%. Using the methodology described above, Washington Township could absorb approximately 22,961 more housing units while maintaining current densities, assuming full development as presented by the 1984 Comprehensive Plan.

The proportion of the housing stock which would be comprised of multi-family housing would increase from 44% in the 1990 estimate to 51% in the case of full development, meaning the current plan anticipates having more multi-family development than what has occurred in the past. The Comprehensive Plan would provide for 6,846 additional units of single family and 16,115 units of multi-family. The proportion of total units which would be single family therefore would decrease from 56% to 49%.

An estimate of total households in Washington Township is determined by multiplying the number of housing units by an assumed occupancy rate of 95% (based on the actual occupancy rate in Washington Township for 1988, as reported by the Postal Vacancy Survey). According to the U.S. Census, 51,768 households resided in Washington Township in 1980. The land use studies of Washington Township indicate that in 1990, that figure had risen 15% to approximately 59,423 households. At full development, the number of households in Washington Township would increase to about 81,236.

Total population for Washington Township in a state of full development is projected to be 182,781 persons, constituting a 42% increase over the 1988 U.S. Census Bureau estimate of 129,008 persons. To reach this figure, the projected 81,236 total households were multiplied by an assumed average of 2.25 persons per household. An average of 2.25 persons per household was assumed by the Division of Planning on the basis that the current downward trend in average household size is expected to continue, and that Washington Township's average household size will remain near the county average.

COMMERCIAL AND INDUSTRIAL CHARACTERISTICS

Full or total development as recommended by the 1984 Comprehensive Plan would result in an increase in commercial property of 171 acres in addition to the 1990 total of 1,630 acres. Retail is assumed to continue to account for 68% of Washington Township's commercial land, and would therefore realize a 11% increase, from 1,103 acres in 1990 to 1,219 acres at full development. Offices would occupy an additional 55 acres of land, a 10% increase over the 1990 level. In terms of building square footage, retail commercial would experience an increase of nearly 1,389,000 square feet, while office use would post a similarly significant gain of almost 663,000 square feet. Therefore, at full development, a grand total of 16,610,291 square feet of commercial building space would occupy nearly 1,800 acres of commercial land in Washington Township.

In 1990, approximately 270 acres of Washington Township were developed for industrial use. Under the 1984 Comprehensive Plan's full development scheme, the future development of an additional 290 acres would boost Washington Township's industrial base 107% above 1990 levels in terms of developed acreage. Square footage of industrial building space would also increase by almost four million square feet.

As the acreage devoted to commercial and industrial uses increases, Washington Township's employment will also increase. Employment densities of one, two, and three persons per 1,000 square feet were assumed for industrial, retail commercial, and office commercial, respectively. By multiplying each of these assumed densities by its corresponding estimated future building square footage, an estimate of additional employment in Washington Township is calculated for each category. Total employment in Washington Township would rise by roughly 8,682 persons (a 20% increase).

RATE OF DEVELOPMENT

The projected residential and commercial full development characteristics of Washington Township were based on the fixed number of acres and the recommendations contained in the adopted Comprehensive Land Use Plan. By applying densities and types of development historically found in Washington Township to the fixed number of total acres, a future development mix was projected with a reasonable degree of certainty. Forecasting the following *rates* of development was done with somewhat less certainty.

HOUSING

To prepare a housing development rate, the 1960, 1970, and 1980 U.S. Census information was combined with the 1990 Washington Township housing inventory previously estimated. Using these data, three annual housing production (or development) rates were derived:

* 30-year rate (1960-1990)..... 1,075 units/year

* 20-year rate (1970-1990)..... 1,052 units/year

* 10-year rate (1980-1990)..... 774 units/year

By applying these rates to the additional 22,961 units projected for full residential development of Washington Township, three possible development horizons were established:

* 22,961 units divided by 1,075 units/year = 21 years (year 2011)

* 22,961 units divided by 1,052 units/year = 22 years (year 2012)

* 22,961 units divided by 774 units/year = 30 years (year 2020)

The range of years for full residential development of Washington Township is projected to be from 21 to 30 years; that is, total residential development of Washington Township, (given that future development rates will fall between 774 and 1,075 units per year) should be reached sometime in the second or third decade of the Twenty-first Century.

COMMERCIAL

The rate of development for commercial land was formulated by averaging the square footage of office and retail construction in Washington Township for the years 1980 through 1990. On the average, 1,577,000 square feet of commercial building space was added to Washington Township's total each year. By dividing this annual average into the additional 2,052,000 square feet of commercial development required to reach the full commercial development anticipated by the 1984 Comprehensive Plan, full development is estimated to occur in just over 1 year. (Note: This very short time horizon results largely from a limited amount of new commercial areas recommended by the 1984 Comprehensive Plan for the undeveloped portions of the township. Therefore, it is considered unrealistic because vacant land may not readily be available for development, and the current economic downturn may inhibit development.)

INDUSTRIAL

The projected development rate and full development horizon for Washington Township's industrial sector were calculated in the same manner as the commercial projection. On average (based upon 1980-1990 data), 94,863 square feet of industrial construction occurred annually. By dividing this number into the estimated 3,915,000 square feet of industrial

development still anticipated by the 1984 Comprehensive Plan for Washington Township, it is projected that complete development would occur in 41 years.

PROJECTION SUMMARY

Washington Township still possesses undeveloped tracts of land which can accommodate future development. In order to reach full development as proposed by the 1984 Comprehensive Plan, the township would have to experience a 37% increase in total housing units, a 14% increase in commercial development, and a 2% increase in industrial development. As a result, the number of households in Washington Township would increase by 57%, and population by 41%. Employment is projected to increase by roughly 8,682 persons. Projected rates of residential development would bring Washington Township to full development within the next thirty years. One possible--if unrealistic--scenario suggests that full commercial development could occur within a year. Finally, industrial development is projected to occur on a more distant horizon--about forty years from now.

The projected horizons for full development of Washington Township vary from roughly twenty to forty years in the future. It is important to remember, however, that these projections are based on current rates of development and those of the recent past. Washington Township's rate of development is actually likely to decrease as the township begins to approach full development. As the area continues to develop, vacant land will become more scarce and increasingly encumbered with constraints to development, making land more expensive both to acquire and to develop (a phenomena currently taking place in parts of Washington Township). As a result, infill development of the remaining vacant land may take longer than the earlier development. Consequently, the more distant horizon presents a more realistic estimate of the range of time during which full development of Washington Township might be reached.

The amount and rate of development necessary to reach a state of full development may heavily burden the local infrastructure in the more rapidly developing areas and in currently developed areas. Township residents and businesses may experience increased congestion, delays in service, and less-than-acceptable margins of safety as the public sector adjusts to meet demand. If the development rate shows, the township may experience less significant negative impacts upon public facilities, infrastructure and services.

Elected Officials

Stephen Goldsmith, *Mayor*

City-County Councillors and Districts

Gordon Gilmer, 1
William Dowden, 4
Stuart Rhodes, 7
Paul Jones, 10
Cory O'Dell, 13
Maggie Brents, 16
Kenneth Giffin, 19
Susan Williams, 22
Dr. Philip Borst, 25
W. Tobin McClamroch, AL

Dr. Beurt SerVaas, President, 2
Linda Beadling, 5
Randy Shambaugh, 8
Rozelle Boyd, 11
Z. Mae Jimison, 14
Jeff Golc, 17
Timothy M. Mullin, 20
David Smith, 23
Carlton E. Curry, AL
Stephen R. West, AL

William Schneider, 3
Elwood E. Black, 6
Monroe Gray, Jr., 9
Betty Ruhmkorff, 12
Mary B. Moriarty, 15
Phillip Hinkle, 18
Frank T. Short, 21
Beulah Coughenour, 24
Ron Franklin, AL

Administration and Policy Direction

Metropolitan Development Commission

William R. Brown
Jack Hall, M.D.
Mary Ann Mills
Michael W. Rodman
Randolph L. Snyder

James J. Curtis, Sr.
Dorothy Miller
Walt Niemczura
Julie P. Scott

Project Coordination

Nancy Silvers, *Deputy Mayor and Director of the Department of Metropolitan Development*

Mike Graham, *Washington Township Administrator*

Department of Metropolitan Development, Planning Division

Jon Meeks, *Administrator*
Thomas Bartlett, Senior Planner
and Project Coordinator
Gina Bush, Graphic Designer
William Gentry, Senior Planner
Jay Getz, Planner
Kira Wauwie, Planner